

# FINANCIAL TIMES

EUROPE'S BUSINESS NEWSPAPER

Wednesday May 9 1984

D 8523 B

Nigeria prepares for austerity, Page 4

## NEWS SUMMARY

### GENERAL

#### Fighting breaks out in Tripoli

Fighting broke out in Tripoli as Libyan security forces moved against dissidents. Observers in the city denied reports that there had been an attempted coup against Col Muammar Gaddafi, or that, as reported from Rome, a group using rockets and automatic weapons had attacked the barracks where Col Gaddafi lives.

An Italian news agency report said that the attackers had been driven back by armoured vehicles, and that a group of 20 were holding out, surrounded by loyal units.

Tripoli businessmen said the shooting started in the morning when armed forces cleared residents from an apartment block.

**Quebec shoot-out**  
Canadian police captured a soldier about 3½ hours after he had gone on a 30-second shooting spree in the Quebec assembly, killing three and wounding at least 13, mostly provincial assembly employees.

**Pope plot trial**  
An Italian state prosecutor has recommended that three Bulgarians and four Turks stand trial in connection with the 1981 Rome assassination attempt on Pope John Paul.

**Soviet build-up**  
Soviet Union has parachuted troops and equipment into Afghanistan's Panjsher valley and consolidated its positions, say Western diplomats in Islamabad.

**Panama tension**  
Panama faced serious political violence after fighting broke out around the parliament building, where general election votes were being counted.

**Biggest UK trial**  
The biggest trial in British history opened in Belfast when 40 alleged Irish terrorists, three of them women, faced terrorism and arms charges.

**Thames barrier open**  
Queen Elizabeth opened the £480m (S\$630m) Thames flood barrier.

**Italian earthquake**  
An earthquake shook the Abruzzi region in southern Italy, killing three, injuring at least 83 and leaving 3,300 homeless.

**Ulster killing**  
Gumma killed a part-time Ulster Defence Regiment soldier as he arrived for work as a hospital porter at Dungannon. The IRA claimed responsibility.

**Violence in Reims**  
At least seven people were hurt and 12 arrested during a demonstration against a meeting of France's extreme right-wing National Front party at Reims.

**Rome taxi strike**  
Thousands of taxi-drivers blocked Rome streets with their vehicles and launching an indefinite strike for higher fares.

**India goes ahead**  
India confirmed that it is going ahead with building a barbed-wire fence along the Bangladesh border.

### BUSINESS

#### U.S. utility defaults on loan payment

PUBLIC SERVICE New Hampshire, a major U.S. power company, is on the edge of bankruptcy after failing to pay its bankers a \$3m instalment on a loan. An attempt will be made this week to arrange financing. Page 29

**LONDON:** FT Industrial Ordinary index fell 10.6 to 944.8. Government securities fell by an average of just over 0.5 per cent. Report, Page 33, FT Share Information Service, Pages 34, 35.

**WALL STREET:** Dow Jones industrial average was up 8.74 at 1,178.30 at the close. Report, Page 29. Full share prices, Pages 30-32.

**TOKYO:** Nikkei Dow index fell 108.52 to 11,032.44, and the Stock Exchange index by 6.29 to 886.21. Report, Page 29. Leading prices, other exchanges, Page 33.

**COPPER** prices tumbled in London, with the cash price £33 down at £1,005 (\$1,390.4). Lead, too, was down, with the cash price £10.25 lower at £320.5 (\$443.4) a tonne. Page 36

**DOLLAR** strengthened as U.S. interest rates continued to firm. Despite Bundesbank intervention, it rose from Friday's DM 2.741 to DM 2.767 in London, to FF 3.5325 (FF 3.525), SwFr 3.261 (SwFr 3.249) and Y22 (Y22.75). Its bank of England trade-weighted index rose from 128.6 to 131.7, its highest since late January. Page 38

**STERLING** closed 2.40 down from Friday at \$1.3835, and slipped to SwFr 3.1575 (SwFr 3.1725) and Y17 (Y20), but improved to DM 3.85 (DM 3.8375) and FF 11.8 (FF 11.77). Its trade-weighting fell from Friday's 80.5 to 80. Page 39

**GOLD** fell \$4.5 to \$372.25 in London. In Frankfurt it closed at \$372, and in Zurich at \$371. Page 38

**HUNGARY** plans to let workers in most enterprises elect their managing directors and to allow greater wage differentials. Page 3

**PORTUGAL:** Seven international banks have applied to open branches after liberalisation of banking laws. Page 21

**SOVIET** geologists have found a field of high-quality oil near the Aral Sea in central Asia.

**SAN MIGUEL** Philippines' biggest quoted company, is to raise 1bn pesos (\$74m) locally. Bigger beer sales helped it to raise net profit in 1983 by 30 per cent to 403.8m pesos. BURNS, FRU Toronto broker, is to acquire Jones, Heward of Montreal. Page 21

**IOB,** the Vatican bank, is to pay the creditors of the failed Banco Ambrósiano \$244m on June 30 as part of a \$400m "recognition of moral involvement," and will agree to submit itself, for the first time, to Italian law. Page 21

The editorial content of today's international edition has been restricted because of continuing industrial action by IG Druck and Papier at Frankfurter Societäts-Druckerei, where the edition is printed. This prevents the publication of late-breaking news, the final Wall Street report and closing U.S. over-the-counter and Canadian share prices.

## Volcker attacked by White House as prime rises

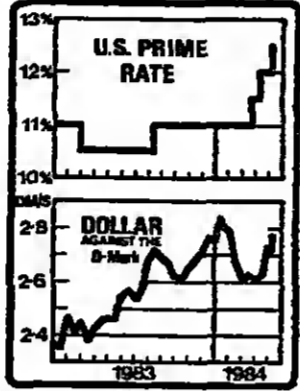
BY STEWART FLEMING IN WASHINGTON AND PAUL TAYLOR IN NEW YORK

A MAJOR row between the White House and the Federal Reserve Board was brewing yesterday over the central bank's conduct of monetary policy. The White House, headed on the Fed after the leading U.S. commercial banks raised their prime lending rates to 12.5 per cent, the highest level since October 1982.

The third half-point prime rate increase of the year sparked sharp criticism of the Fed by White House spokesman Mr Larry Speakes. "It appears the money supply is not accommodating real economic growth," he said. Mr Speakes attacked Fed chairman Mr Paul Volcker for putting too much emphasis on fighting inflation in the conduct of Fed monetary policy.

"We have lived up to our promise of low inflation," he said. But in a move which could presage new divisions within the Administration, Mr Martin Feldstein, chairman of the President's council of economic advisers, defended the central bank saying that recent shifts in Fed policy were "not inappropriate."

The White House iposte brings to an end a period during which officials have been cautious not to attack the Fed in public and signals



the heightening sensitivity within the Reagan Administration as the presidential election approaches. The prime rate increase promises to have worrying international, as well as domestic, repercussions because of the deepening anxieties about the implications of higher rates for debt-ridden Third World borrowers. Mr Volcker recently described the danger of a rapid rise in international interest rates as "the greatest single threat" to the resolution of the Third World debt crisis.

Echoing these concerns, Mr Feldstein, yesterday issued a warning

that "the shape of the yield curve and the prices in the interest rate futures market imply that a significant rise in short rates is expected over the next 18 months." He also called for the industrial countries to change their approach to the Third World debt problem.

Separately, the International Monetary Fund fuelled the deepening controversy about U.S. economic policy. In its report on the "world economic outlook" released yesterday, the IMF warned that "the high interest rates prevailing in the United States and the associated strength of the dollar appear to constitute a potential threat to smooth and sustained global economic growth."

Elsewhere in the report, the IMF cites sustained growth and declining interest rates as crucial variables if the Third World debt crisis is to remain manageable.

Yesterday's prime rate increase was expected because of the continued upward movement in other US short-term market rates resulting in higher bank funding costs.

Continued on Page 20  
Hope for Third World, Page 4; Lex, Page 29 Money Markets, Page 29

## Saudi tanker set ablaze by Gulf missile

BY RICHARD JOHNS IN LONDON AND KATHY EVANS IN DUBAI

A SAUDI-OWNED oil tanker, the 117,800 dwt. Al Ahood, was last night ablaze in the Gulf about 80 miles south-east of Kharg Island, where it had loaded Iranian oil.

The incident was believed to be the result of the second Iraqi attack by an aircraft-launched Exocet missile on a Saudi-registered vessel carrying Iranian oil in the past 12 days.

The position of the Al Ahood would mean that the missile must have been delivered by one of the five Super Standard aircraft supplied to Iraq by France.

Leading Lloyds underwriters yesterday raised war risk premiums on seven-day voyages to the Gulf from 1.5 per cent to 2 per cent of bull value. The latest attack is also bound to raise cargo rates which had already climbed above 0.75 per cent in the wake of the explosion on the Safina al-Arab tanker on April 25.

The Al Ahood was reported last night still to be ablaze as fire-fighting and salvage vessels sped to it from Bahrain. One member of the crew was killed by the explosion, which took place on Monday night, but the rest of the crew were rescued by a passing Greek vessel.

Earlier Iraq had claimed that its air force had successfully attacked two targets "believed to be vessels from the Iranian Kharg Island." No other damage to ships apart from

the Al Ahood was reported yesterday however.

The latest incident is bound to strain relations between Iraq and Saudi Arabia, which has been mainly responsible for keeping its Arab ally financially afloat in its long conflict with Iran.

Last week President Saddam Hussein of Iraq appealed to "Arab brothers" not to charter ships for loading oil at Kharg Island.

Mr Tariq Aziz, Iraq's First Deputy Prime Minister, is understood to have gone to Riyadh for talks with Prince Saudi al-Faisal, the Saudi Foreign Minister, following the explosion aboard the Safina al-Arab. The Saudi Government apologised that ships carrying its national flag had been helping Iran export oil, according to Arab diplomats.

The Al Ahood is owned by the Amar Lions Maritime Company which is based in Jeddah. A leading shareholder is the Saudi entrepreneur Mr Gaith Pharoan who is a former Royal Adviser.

It is managed by Shipping Management S.A.M. of Monte Carlo and had been on charter to a "Mediterranean" oil concern, according to the owners. They did not reveal its name but the company in question is understood in shipping circles to be Cameli of Geneva.

## Pressure on UK banks to increase base rates

BY PHILIP STEPHENS IN LONDON

RISING U.S. interest rates yesterday strengthened pressure in financial markets for an increase in Britain's base lending rates despite the announcement of lower-than-expected money supply growth last month.

Provisional Bank of England figures showed that the most closely-watched measure of the money supply, sterling M3, grew by only ¼ per cent in April, well below most expectations in the City of London.

A brief rally in the gilt and money markets was short-lived, however, as U.S. banks lifted their prime rates and further widened the gap between British and U.S. levels.

Leading UK banks indicated that they would decide within the next few days whether to raise their base rates to 9 per cent, but there were signs last night that an upward move could come as early as today.

The banks' rates are currently set at 8½ per cent, except for Barclays which is at 8 per cent and subject to more frequent changes through a market-related formula.

The small rise in sterling M3, which takes its annual growth over the last 12 months to 8½ per cent, well inside the present 6 to 10 per cent target range, surprised financial markets.

But statistics indicating that the

increase in April was held down by erratic external influences and changes in the banking sector's capital base tempered sentiment that money supply growth is slowing.

A further strong rise in bank lending to the private sector, up £1.5bn (\$2.07bn) in April, also encouraged speculation that base rates will rise, while upward pressure on producer prices caused some anxiety over future inflation.

The key three-month interbank rate, at which banks borrow much of their funds, rose to just under 9½ per cent at the close, at level which wipes out the profits the banks can make on loans to blue-chip customers.

## Datastream agrees to Dun & Bradstreet bid

BY CHARLES BATCHELOR IN LONDON

DUN & BRADSTREET, the U.S. business information group, is to make a £75m (\$102.8m) agreed cash bid for Datastream, the British financial information group. D&B has already gained acceptance for its offer from the owners of 58.3 per cent of Datastream's shares.

D&B, which claims to be the world's leading credit rating agency - assessing companies on their ability to pay their bills - last night announced it will offer 55p for each Datastream share. Datastream was suspended earlier in the day at 380p.

Mr David McBride, vice president of D&B said: "Datastream fits perfectly into D&B's corporate policy of expanding further into the business information sector. It seemed

to us they were a clear leader in a very important market segment. Our world-wide data base will add a dimension to their primarily stock-based information service."

Both companies concentrate on supplying historical information, mainly on companies, to analysts working in the "back rooms" of financial groups.

Mr Paul Bosonnet, Datastream chairman, said: "We first held discussions a few weeks ago but things really came to a head in the last couple of days. They can provide something from their wide international basis which we would lack on our own."

D&B started out in 1841 as a credit information service - it owns

## AEG sharply lifts profits in quarter

BY JONATHAN CARR IN FRANKFURT

AEG-Telefunken, the West German electronics group, is well on the way to making 1984 its second profitable year in a row, after sharply increasing earnings in the first quarter.

Herr Heinz Dürr, the chief executive, also announced that AEG would definitely meet the September deadline for paying back more than DM 1bn (\$859.7m) of debt to key creditors.

Despite AEG's progress - worldwide group net profit in 1983 was DM 37m after an operating loss of DM 832m in 1982, Herr Dürr stressed that much remained to be done.

Profits were still too low and net financial liabilities too high, although the latter had been cut by DM 700m to a total DM 1.8bn during 1983.

In particular, Herr Dürr saw no early prospect of a capital increase or of restoring dividend payouts which have been suspended since 1973.

Despite Herr Dürr's low-key remarks, the results are widely seen as marking a big turnaround for the

company, which came close to financial collapse in 1982 and had to seek court protection from its creditors.

Under the terms of the Vergleich - composition proceedings - accepted in March last year, AEG was released from 60 per cent of its debt burden, but agreed to pay the other 40 per cent in 18 months at the latest.

AEG's creditor banks have agreed to make available the sum of DM 1.04bn due to them through the Vergleich as a new credit for AEG from September.

In future, however, AEG will have to pay interest on the loan, from which it was freed during the Vergleich, of perhaps around DM 100m annually. This was one reason for Herr Dürr's cautious comments about prospects.

Last year's earnings improvement came against the background of a fall in group sales of 1 per cent to DM 11.5bn and a cut in the labour force of 12 per cent to 76,800.

Coping with success, Page 19; Siemens boosts profits, Page 21

## U.S. court delays Shell deal

By Terry Dodsworth and William Hall in New York

ROYAL DUTCH Shell's takeover plan for the minority share holding of Shell Oil, its U.S. subsidiary, was faced with serious delay yesterday after a U.S. court backed dissident shareholders seeking to block the deal.

Shell Oil shares fell 5½ to 57½ immediately after the news.

Only a day before the tender offer was due to close, the Vice-Chancellor of a Delaware court, Mr Maurice Hartnett, granted a preliminary injunction against Royal Dutch until it made "further disclosures" to the tender offer.

The original offer was scheduled to expire at midnight tonight. Ahead of yesterday's judgement, however, there had been considerable doubt as to whether Royal Dutch would be able to win control by tonight.

The court action was brought by minority shareholders who were dissatisfied with the offer price and had sought more information from Royal Dutch.

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EUROPEAN NEWS

Soviet proposal holds promise of progress on boosting security

BY DAVID BROWN IN STOCKHOLM
A PROPOSAL which could pave the way to meaningful negotiation on one key detail of disarmament was tabled here by the Soviet Union yesterday at the resumed session of the European Security Conference.

Belgium to float BFr 100bn special loan

BY Our Brussels Staff
THE BELGIUM Government is floating a special Treasury loan for BFr 100bn (€128bn).

DUTCH PACT ADDS PRESSURE FOR MORE LIBERAL EEC RULES

UK steps up air transport campaign

BY PAUL CHEESNIGHT IN BRUSSELS
THE BRITISH Government is intending to use a new agreement with the Netherlands as a means of putting pressure on other EEC countries for more liberal air transport regulations.

approach is useful because it puts extra pressure on governments like Italy's which are reluctant to see any change in the air transport regime.

Law to be enforced against insurance curbs

BY CHRISTIAN TYLER, TRADE EDITOR

THE EEC Commission will take legal action against member-states that continue to block free trade in non-life insurance services, a Brussels official said yesterday.

by the Kangaroo Group an international lobby of Euro-MPs campaigning for a free internal market.

Mr Paul Channon, the UK Trade Minister, told the conference that Britain was supporting the Commission's campaign, but found itself "very much in the minority in Brussels."

there are problems," he said. "Some of the arguments confuse protection of the policyholder with protection of the insurer from outside competition."

Italian banks association urges cut in prime rate

BY JAMES BUXTON IN ROME

THE Italian bankers' association (ABI) yesterday called on banks to lower their prime lending rate following last Friday's cut of 0.5 per cent in the Bank of Italy's official discount rate.

fixing an official ABI rate, which is still indicative rather than compulsory.

Brussels refutes Greek claims of trade crisis

BY ANDRIANA IERODIACONOJ IN ATHENS

THE EUROPEAN Commission says that Greece's accession to the EEC has not caused the crisis in the country's foreign trade which is claimed by government economists in Athens.

to trade between Greece and the other members of the EEC.

Imports of manufactured goods from the Community rose by 5 per cent in 1981, then fell by 2 per cent in 1982 and by 6 per cent in the first ten months of 1983.

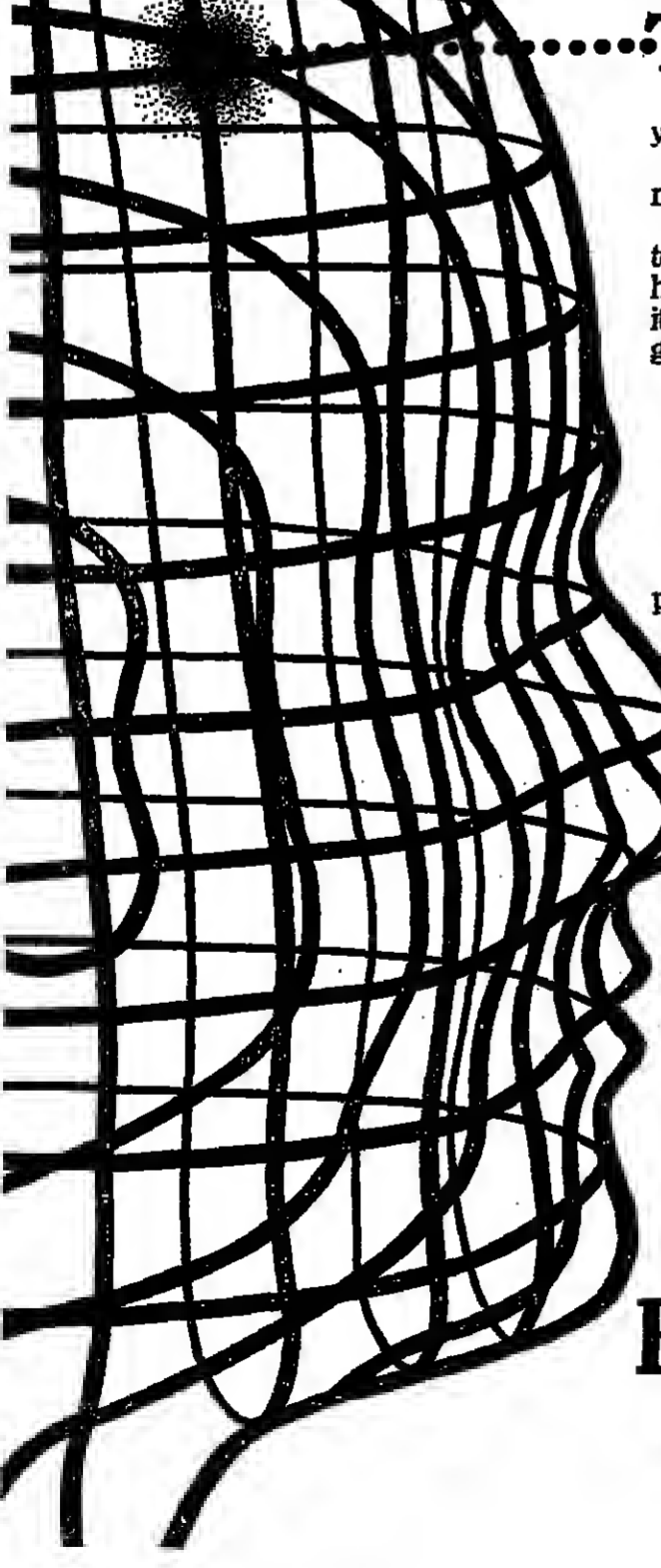
Lome states offered talks on issues outside pact

BY IVO DAWNAY IN BRUSSELS

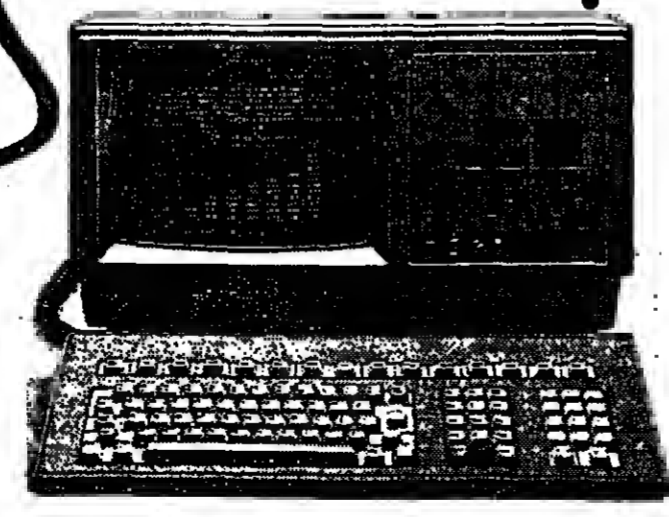
EEC DEVELOPMENT ministers have offered talks on a series of issues outside the bounds of the Lome trade and aid convention to their African, Caribbean and Pacific (ACP) partners in return for tighter controls on how funds are spent.

a third five-year Lome pact. Some progress was made last week on a number of controversial issues which could be resolved outside the main Lome package.

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EUROPEAN NEWS

### Hungary aims to give its managers greater freedom of action

BY DAVID BUCHAN IN BUDAPEST

HUNGARY INTENDS to let workers in most enterprises elect their managing directors, and to permit greater wage differentials to encourage workers to move to better companies and work harder once they are there, Mr Miklos Pualai, deputy chairman of the National Planning Office, said yesterday.

He gave details, in an interview, of last month's Communist party central committee decision on economic reform, in advance of the full communiqué to be published later this week. He described the decisions as the most important for 16 years. The last time the central committee dealt so thoroughly with economic reform was in 1966, two years before Hungary embarked on its reformist road.

Following the party's reaffirmation of economic reform, Hungary would like to extend its present loan-adjustment programme with the International Monetary Fund beyond the end of this year, Mr Pualai said. But any discussion of this with the IMF would come later this summer.

Only the broad lines of the

new changes, which would introduce a large measure of Yugoslav-style self-management (once considered a heresy in the Soviet bloc) over the next two years, have been agreed. But Mr Pualai already detected a danger of the reforms being misunderstood in the West as enhancing the private sector.

Only 3 per cent of Gross Domestic Product, including industry, agriculture and services, was in purely private hands in Hungary, and he stressed that this share would not increase.

He said that a supervisory "enterprise council" would be set up in all industrial companies, except for those related to defence and public services and so-called trusts which have a monopoly in such areas as oil and aluminium.

The councils would be able to approve appointments of directors, decide on investment, wages and prices, and determine production strategy. But the Industry Ministry will keep a reserve veto over directors' appointments and any decision involving liquidation or creation of companies.

### Decision on Polish prisoners likely soon

By Christopher Bobinski in Warsaw

THE CATHOLIC church's efforts in Poland to secure the freedom of the country's most prominent political prisoners have reached their final stage. Talks over the next seven days should clarify whether the authorities are now ready to free the prisoners.

Sr Emilio de Olivares, a senior assistant to the United Nations Secretary General, saw nine of the 11 last week. He told them they would be freed if they agreed to leave Poland for between six and 12 months under a United Nations guarantee that they would be allowed to return.

He failed to see Mr Marian Jurczyk, who is being treated for a heart condition in a clinic, or Mr Adam Michnik, who is refusing to discuss any sort of conditional release.

The Church, meanwhile, is linking the freeing of Poland's other 490 political prisoners, 61 of them already sentenced, to the fate of the 11.

It remains to be seen what kind of guarantees of "good behaviour" the 11 would be ready to sign if their release were accompanied by a general freeing of political detainees by July 22, the fortieth anniversary of the Polish People's Republic.

The 11 who are awaiting trial on charges of anti-state activity and have been in detention since December 1981, have so far resisted promising to desist from political activity in return for their freedom.

It has become clear that the authorities want to avoid a trial which would upset both Western and internal public opinion. And Moscow is believed to be no longer insisting that the 11 be sentenced.

The Government is still hoping to persuade them to emigrate. This would lower their prestige in the eyes of Solidarity's supporters and is one reason why they are refusing to accept.

Sr de Olivares is to return to Poland soon to hear the decision of the 11 on his proposal.

## Ghost haunts Sweden's economic boom

BY KEVIN DONE, NORDIC CORRESPONDENT, IN STOCKHOLM

THE SWEDISH Government's economic planning "is like a well-laid table standing on rickety legs," Mr Nils Asling, former Industry Minister from the opposition Centre Party, claimed in a recent debate in the Riksdag, the Swedish Parliament.

Laid out for all to see are the bright statistics of the country's strengthening recovery. Exports are booming and the current account has been brought almost into balance - an enormous improvement on the SKr 22.5bn (\$3.8bn) deficit run up in 1982, the last of six years rule by the non-Socialist coalition.

Industrial production is expanding robustly and industrial investment after several years of decline is expected to rise by 15 per cent this year according to the Government's latest confident forecast.

Profits of many of the big multinational corporations which earn their living overwhelmingly in export markets are at record levels after virtually doubling in 1983.

Even Mr Kjell-Olof Feldt, the Social Democratic Finance Minister who is presiding over the upturn like a stern schoolmaster with some errant pupils has been forced to admit that Swedish industry has shown "a surprising and unexpected vitality and dynamism" since the October, 1982 devaluation.

It was the Social Democrats' lowering of the value of the Swedish krona by 16 per cent that helped to trigger the current export boom giving industry its best level of competitiveness in international markets for more than 10 years.

The fast is being haunted by a ghost, however. The table is wob-



Finance Minister Feldt: "like a stern schoolmaster"

bling because the Government has failed so far to squeeze inflation down to the levels of the country's major trading partners. If inflation were allowed to run for too much longer at almost double the level of countries such as West Germany and the UK, that precious competitive advantage would quickly be eroded. In March consumer prices were still running at 9 per cent above the level a year earlier.

The Social Democratic administration faces a cruel dilemma. With an election due next year it is clearly keen to trumpet its successes. With the sobering memories still fresh of the second half of the 1970s when high inflation and rocketing costs rapidly priced Swedish goods out of world markets, the Government is aware, however, that the whole edifice could come tumbling down again.

It has set its targets well enough - inflation to be cut to 4 per cent by the end of the year and to 3 per cent by the end of 1985, total wage costs in 1984 not to rise by more than 6 per cent. But it has failed to take the employers and the trade unions along with it.

The two sides of industry have been experimenting this year with a new pattern of bargaining that has broken with the highly centralised national wage talks which have been the rule for much of the post-war period.

Negotiations have been conducted by sector, chiefly at the insistence of the employer, who have been seeking greater flexibility and an escape from the "solidarity wage policy" under which a statutory minimum wage is negotiated. This

policy has been championed by the trade unions.

"You could visualise a smoothly working decentralised pay bargaining system, but what we now have seems to be a rather chaotic and unfortunately quite inflationary system," observes a senior Finance Ministry official.

The private sector has heaped the blame on the state employers for being too lax in their initial negotiations with the public sector unions. Certain clauses in the agreements in the local government sector, which set the pace in this year's wage round, have come under particularly heavy attack for the way they link public sector wages to wage drift in the private sector and to general inflation. This sort of linkage will not have too disastrous an effect in 1984, but it is seen as an inflationary time bomb for 1985 and following years.

In the consequent private sector deals, such as that in the important engineering sector, settlements were reached which could mean wage rises of around 9 per cent. Overall the Finance Ministry estimates that wage costs could rise by at least 7.5 per cent this year. Mr Olof Palme, the Prime Minister, made a last minute plea for moderation to the two sides in the engineering industry, but in vain.

Fearful that this year's wage settlements and the trouble already stored up for 1985 would blow its strategy way off line, the Government moved last month to set a new course. In a series of sweeping measures it introduced a general price freeze to the end of the year, frozen rents and forbade companies to raise dividends for 1984 above the 1983 level.

At the same time it drained several billion krona from the corporate sector and from the local authorities and temporarily sterilised this liquidity in blocked accounts at the central bank in a bid to persuade the employers to hold down local wage settlements.

The moves were bitterly criticised as panic-measures by the opposition and economists claim the package is merely cosmetic. "A price and rent freeze attacks the symptoms, not the causes of inflation," says Mr Olle Lindgren, chief economist at S-E Banken. It has no impact in driving down inflationary expectations, especially in the long term.

The Government is shirking its responsibility for economic policy. Instead of pursuing policies to reduce inflationary expectations, it is taking measures which pass on responsibility for fighting inflation to the two sides of industry.

The package of emergency measures is designed to provide a cooling-off period for both the unions and the employers. The Government is anxious to see if they can put their own house in order so that it can avoid treading the perilous path towards introducing some form of incomes policy.

Traditionally the Government has stayed outside the collective bargaining process in Sweden. The unions would apparently welcome some government pressure on the employers to bring a return to centralised wage negotiating practices, but they would be up in arms at any formal state incomes policy.

The next test will come on June 6 when the unions and employers report back to Mr Palme and Mr Feldt about progress in reaching a new accord on forms and conditions for more moderate wage bargaining for 1985. The Government has made clear that the threat of state intervention is waiting just round the corner, but it is desperately anxious not to have to act.

There are doubts too about its eventual resolution. "In early 1985 the economy will look very bright with high profits, rising demand for labour and a very low external deficit, if any. Not a very good background for halving the customary wage increases," says Mr Nils Lundgren, chief economist at PKBanken. "The Government will have to do something. But then again, 1985 is an election year."

### Sakharov's wife restricted and accused of slander

MOSCOW - Yelena Bonner, wife of Soviet dissident Andrei Sakharov, has been confined to Gorky by the police, a friend of the family said yesterday. Dr Sakharov himself is on hunger strike.

Ms Irina Kristi, a mathematician, told Western journalists that she had visited their home in Gorky, a city about 250 miles east of Moscow and closed to foreigners, last Sunday and spoke in the couple for three minutes before police detained her.

Dr Sakharov, a Nobel Peace Prize winner, was banished to Gorky in 1980 to stop his human rights campaigning.

Ms Kristi said that Dr Sakharov told her he "will fast until the very end" unless his wife is allowed to leave the country for treatment of an eye condition.

Until now, Mrs Bonner's

recent whereabouts were unknown. Other friends said she had been expected in Moscow on May 2, but she failed to appear.

The Soviet Press, meanwhile, published one of its harshest attacks on the couple who helped found the Soviet human rights movement in the 1970s.

Since Dr Sakharov was forced into exile, Mrs Bonner has been allowed to travel in Moscow - where she often met Western diplomats and journalists and served as her husband's link to the West.

Now, according to Ms Kristi, police have told her they are investigating her under the slander law, which carries a sentence of up to three years in prison and is often used against dissidents.

In addition to her eye ailment, Mrs Bonner has had two heart attacks.

Agencies

### Juan Carlos to visit Moscow—a trip rich in ironies

BY TOM BURNS IN MADRID

SANDWICHED BETWEEN a reception for ambassadors accredited in the Kremlin and an evening at the Bolshoi to see "Swan Lake," King Juan Carlos and Queen Sofia have an hour or so set aside for a meeting with the Spanish colony in Moscow.

There is more than a passing irony in the fact that the Republican "Civil War children" who were taken by their thousands to Moscow during the 1936-39 Spanish Confederation will be hosted in their country of exile by the restored Spanish monarchy.

The six-day visit to the Soviet Union that King Juan Carlos begins tomorrow is rich in ironies. There is, for example, the case of the Soviet-backed Partido Comunista, the dissident splinter group of the mainstream Spanish Communist Party, which held its constituent congress this year with an avowedly Republican platform.

Another is that the king starts his visit just as Prime Minister Felipe Gonzalez winds up a trip to Denmark in which he has made the most forthright statements to date on his Government's favourable view

## Juan Carlos to visit Moscow—a trip rich in ironies

of the Nato alliance.

Spanish officials stress that the royal trip will skate round any controversies and make no attempt to break diplomatic ground. The itinerary takes in Leningrad, Tashkent and Samarkand, with visits to local markets, monasteries and museums as well as receptions.

Stressing the "normality" of the visit, Madrid officials say the only element that caused some concern during its preparations was the possible criticism it might prompt in hardline Spanish right-wing circles. In the event, this has not materialised.

Despite such protestations there is no escaping the significance that King Juan Carlos is not only the first Spanish head of state to visit the Soviet Union but also only the second Western head of state, after the Finnish President, to be received by Mr Konstantin Chernenko, the new Soviet leader.

Sr Fernando Moran, the Foreign Minister, who will accompany the monarch, has bilateral talks scheduled with his counterpart, Mr Andrei Gromyko. High on their agenda will be detente in general and the Stockholm disarmament conference in particular.

Although Spanish-Soviet relations, formally restored in 1977, are low-keyed both politically and economically, there has been a heightened and at times intense contact in a multilateral context as a result of Madrid's hosting of the European Security and Co-operation Conference which ended last year. The final compromise Madrid document between the East and West blocs last September owed much to Sr Moran's diplomacy,

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AMERICAN NEWS

Violence surrounds counting of Panama general election vote

BY DAVID GARDNER IN PANAMA CITY
PANAMA was facing the prospect of serious political violence yesterday after an outbreak of fighting on Monday night around the Parliament building where the counting of the vote from Sunday's general election has begun.

Canada signs last batch of east coast drilling deals

BY BERNARD SIMON IN TORONTO
THE CANADIAN Government has signed the final batch of agreements with companies for oil and gas exploration off the east coast.

Short-term prospects for South African economy 'poor'

BY OUR JOHANNESBURG CORRESPONDENT
SHORT-TERM prospects for the South African economy are poor and a sustainable recovery depends on improved balance of payments, according to the Standard Bank review for May published yesterday.

Rebels step up attacks inside Mozambique

BY OUR FOREIGN STAFF
ANTI-GOVERNMENT rebels in Mozambique have stepped up their attacks within the country since the signing of a non-aggression pact between Maputo and Pretoria designed to remove South African support for them.

Nicaragua asks France for help to clear mines

BY TIM COONE IN MANAGUA AND HUGH O'DONOGHUE IN LONDON
NICARAGUA has made a formal request to France for aid to clear mines from Nicaraguan waters. A CIA-sponsored mining operation caused damage to five foreign ships at the ports of Corinto and Puerto Sandino in March and a fishing vessel was sunk at Corinto at the beginning of this month.

IMF says interest rate cut vital

BY STEWART FLEMING IN WASHINGTON
DEBT-RIDDEN Third World countries can achieve adequate rates of growth and a manageable debt-service burden by 1990, provided certain key assumptions, including a 3 per cent point decline in nominal interest rates on floating-rate loans, fall into place.

Call for loan insurance scheme

BY PETER MONTAGNON, EUROMARKETS CORRESPONDENT
AN INSURANCE scheme that protected lenders against loss of interest and principal could help encourage banks to continue lending to developing countries, according to Mr Henry Wallich, a Governor of the Federal Reserve Board.

Robert Graham profiles El Salvador's probable poll victor Duarte: little room for manoeuvre

DURING the presidential election campaign in El Salvador, a foreign journalist asked Jose Napoleon Duarte why he was called Nepeoleon. Having answered a string of questions with confidence, even arrogance, he was suddenly dumfounded.

Hart hopes for revival of campaign in Ohio, Indiana

BY REGINALD DALE, U.S. EDITOR, IN WASHINGTON
SENATOR Gary Hart was pinning hopes for a last-minute revival of his struggling presidential campaign on voters in Ohio and Indiana, who went to the polls in state primaries yesterday.



Duarte: pledge to end fighting

Japan's defence 'behind schedule'

BY JUREK MARTIN IN TOKYO
JAPAN officially recognised yesterday that its programme to improve national defence, drawn up in 1976, has fallen three years behind schedule.

India to speed Bangladesh fence

BY JOHN ELLIOTT IN NEW DELHI
INDIA INTENDS to go ahead with construction of a barbed-wire fence along its border with Bangladesh, despite protest from the Bangladesh Government.

OVERSEAS NEWS

Quentin Peel reports on the effects of a tough Budget after a currency changeover

THE COMBINATION of Nigeria's latest austerity budget and the effects of a currency changeover will result in a sharp reduction in the level of economic activity in the country, according to first business estimates.

France rebuffs Gemayel

MR AMIN GEMAYEL, the Lebanese President, yesterday failed to win the backing of Mr Francois Frangieh, the former President and the last major political figure opposing the country's new Government of national unity.


Poll backs Marcos candidates

BY CHRIS SHERWELL IN MANILA
AN INDEPENDENT public opinion poll presented ahead of next Monday's national assembly election in the Philippines has lent support to forecasts of a clear victory for candidates backed by President Ferdinand Marcos.

India to speed Bangladesh fence

INDIA INTENDS to go ahead with construction of a barbed-wire fence along its border with Bangladesh, despite protest from the Bangladesh Government.






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# WORLD TRADE NEWS

## Two charged over export of U.S. technology

CHICAGO — Two computer salesmen from New Zealand and Hong Kong have been charged by a federal grand jury as part of the Government's crackdown on the unlicensed export of sensitive U.S. technology. The equipment, valued at \$115,000, was purchased from Computer and Terminal Exchange of Pensacola, Florida. It was seized by customs officials at Chicago airport in August, 1983 after an investigation. Charged with violating the Export Administration Act, conspiracy and making false statements to customs agents were Mr Denis Fife, 36, a New Zealander, and self-employed computer salesman doing business as Dimension Systems of London, where he resides, and Mr Anthony Chan, a Canadian citizen living in Hong Kong. The technology was capable of being used in weapons systems as well as for scientific and industrial uses, a U.S. customs official said. AP

### Australia, W. Germany discuss submarine

Australia and West Germany have had initial talks on a multi-million dollar deal to supply a new generation of German-built submarines to the Australia Navy, Reuter reports from Kiel. Herr Juergen Westphal, the Economics Minister for the state of Schleswig-Holstein said Canada and New Zealand may possibly join the project, which involves development of a new type of submarine.

### Sandoz in S. Korea

Sandoz, the Swiss chemical group, has reached a co-operation agreement with Dong Wha pharmaceutical industrial company, one of South Korea's leading pharmaceutical manufacturers, John Wicks writes from Zurich. This foresees the setting-up of a jointly-owned subsidiary to be called Sandoz Korea for the production and marketing of pharmaceuticals for the Baese company's sales programme in South Korea.

### Lurgi's Argentina deal

Lurgi of West Germany has won a contract for basic engineering work on Argentina's first polypropylene plant, expected to supply the country's whole domestic requirement and to produce a sizeable volume for export. Reuter reports from Frankfurt. Lurgi, a Metallgesellschaft subsidiary, said the plant, planned by Petroquímica Cuyo, will cost around \$90m.

## Bank urges Panhandle to keep Algerian LNG contract alive

BY FRANCIS GHILES AND JAMES BALL

A LEADING U.S. bank has asked Panhandle Eastern Corporation's Trunkline LNG subsidiary to keep alive its Algerian contract, if only at a token level. This follows the U.S. company's suspension last December of its contract to buy 5bn cu metres of gas annually from Algeria's state oil and gas company, Sonatrach.

This follows a memorandum six weeks ago presented by Sonatrach alerting eight leading U.S. banks to the damage the suspension of the contract would do to its foreign exchange earnings. It is claimed that Sonatrach would lose about \$500m earnings. It would cut exports of LNG by 3bn to 12bn cu metres in 1984. Overall the company earned \$12.7bn from its exports of oil, gas, condensates and liquid petroleum gas last year.

One option open to Sonatrach is to accept the role of a U.S. peak shaving supplier—peak shaving involves meeting winter surges in demand rather than supplying year-round base loads. Algeria already plays this role for Distrigas of Boston to which it supplies 1.3bn cu metres each year.

Sonatrach, meanwhile, is involved in an increasingly acrimonious dispute with Enagás of Spain over the take-or-pay clause of a contract signed in 1974 which the Spanish company has never honoured despite a 1979 adjustment in

### ALGERIAN-SPANISH LNG TRADE

| Take-or-pay volumes contracted in 1974* | Contracted and taken supplies—bn cubic metres |      |      |      |      |       |      |      |
|---|---|------|------|------|------|-------|------|------|
|   | 1976  | 1977 | 1978 | 1979 | 1980 | 1981  | 1982 | 1983 |
| 0.51                                    | 1.53  | 3.06 | 3.57 | 3.57 | 3.57 | 4.59  |      |      |
| 0.45                                    | 0.25  | 0.35 | 0.61 | 1.20 | 1.35 | 1.40† |      |      |

Notes: \* Amended in 1979 to extend the final rise from 1980 to 1982; † 1982 through Q1 1984.

Sources: Instituto Nacional de Hidrocarburos and Financial Times International Gas Report

Spain's favour. Although Algerian exports of LNG to Spain have increased gradually since 1980, to reach 1.4bn cu metres in the year to April 1984, today such shipments still amount to less than one-third of the initial volume contracted for by Enagás.

A \$56m deal to build a dam at Mexenno, which had been awarded to three Spanish companies, was cancelled last month and the Algerian authorities are threatening further reprisals.

Although the volume of Algerian gas exports will rise in 1984, this increase is somewhat deceptive as it is solely due to the build-up in deliveries to Italy via the Trans-Mediterranean gas pipeline. Supplies to Italy are expected to reach 7bn cubic metres in 1984. But LNG plants in Algeria will continue to operate at about 50 per cent capacity.

Shipments of LNG to France will remain at the same level as last year, 9bn cubic metres;

Gaz de France will try to cushion itself against over-supply by reducing takes of gas from the Soviet Union. The latest contracts with Western European customers include an 80 per cent take-or-pay clause allowing a 20 per cent reduction in annual take before further reductions are negotiated. Italy, too, is likely to try to make the Soviet Union rather than Algeria its flexible or "swing" supplier.

The unit price per million British Thermal Units (BTU) paid by Sonatrach's customers varies widely. Prices of deliveries to France, Belgium and Italy have dropped to around \$3.94 per million BTU, while Trunkline was suspended at \$3.51m BTU last December. This is the level Distrigas of the U.S. is estimated to be paying currently, while the Spanish price may be as low as \$2.75.

In recent negotiations, Spain has offered to raise its price to \$3.94 in return for agreeing a lower contract volume.

## Mitsubishi in Spanish engine accord

By Robert Cottrell in Tokyo

MITSUBISHI Motors Corporation (MMC), the Japanese automobile manufacturer, plans to supply petrol engine parts and technology to Mercedes-Benz España (MBE), the Spanish commercial vehicle manufacturer which is a subsidiary of Germany's Daimler-Benz.

The deal marks MMC's first operational tie-up with a European vehicle manufacturer, but Mitsubishi Motors said yesterday that the companies are not discussing licensing production of MMC commercial vehicles to MBE. According to a plan now being studied by both groups, some 8,000 MMC two-litre petrol engines would be fitted annually to MBE commercial vehicles, starting next year. In 1982, MBE produced some 12,000 diesel-powered commercial vehicles and vans,

## Dowty wins Brazilian coal mining equipment order

BY ANDREW WHITLEY IN RIO DE JANEIRO


DOWTY MINING EQUIPMENT, CRM wishes to take. One part of the Dowty Group of Britain, has broken a long drought for UK industry in Brazil by winning a \$16m order for coal mining equipment. Dowty was recently informed by Companhia Riograndense de Mineracao (CRM), the Rio Grande do Sul state mining company, that it had won the tender to supply equipment for a major new coal mine, Leao II, beating competition from Japanese, West German and other UK companies.

The Tewkesbury company is to supply CRM with five "long-wall" mining faces—the most advanced, and most expensive, form of coal mining—as well as additional equipment. Much of this will be sub-contracted from other UK manufacturers, including Anderson Strathclyde. Final negotiations in Rio Grande do Sul this week will settle which of two alternative "packages" of equipment

Import finance is being provided by the Inter-American Development Bank (IDB). Indeed, the availability of IDB finance was probably crucial to the success of the Dowty bid, under negotiation for over two years. Britain's Export Credit Guarantee Department (ECGD) and most other western official credit agencies are currently reluctant to extend new medium-term cover to Brazil.

The order, estimated at between \$21m and \$23m, will be the largest won by the UK in Brazil since late 1982. If all goes well over the coming days, final contracts are likely to be signed next week.

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WORLD TRADE NEWS

Latin American move towards common market

BY JIMMY BURNS IN BUENOS AIRES

A MODEST but potentially significant step towards the formation of a new common market in the Third World was taken at the end of April in the Uruguayan capital of Montevideo when leading government officials from 11 Latin American countries met under the auspices of the Association for Latin American Integration (Aladi).

In a rare display of regional consensus officials approved in principle the following points:

- Implementation of a system of preferential tariffs;
Presentation of a programme by November 30 to reduce all non-tariff barriers within the region within a three-year period;
A commitment to revive the 1980 Santo Domingo multilateral accord which set up mechanisms for co-operation between central banks in the region for settling trade payments;
A commitment for broad support for the promotion of bilateral counter-trade agreements in the region as a way of saving foreign exchange at a time of persistent balance of payments difficulties;
A schedule for Aladi comprising at least two meetings a year to reinforce the spirit of regional association and the practical aspects of co-operation and interchange.

Rhetoric has certainly surrounded the theme of Latin American integration until now. Aladi had until recently been dismissed as an essentially bureaucratic institution capable of absorbing part of the huge surplus in the Latin American civil service, but with no real achievements to its name.

While Aladi's headquarters has dragged its feet over procedure and protocol, member countries have blatantly flaunted the organisation's spirit by introducing a mounting list of non-tariff barriers, and ignoring the financial agreements of Santo Domingo in response to their mounting debt problems.

Last year out of \$50bn of manufactured goods and \$10bn in foodstuffs imported by Latin America only \$4bn and \$2bn respectively came from within the Aladi grouping.

Officials believe that if the political will is maintained and strengthened then Aladi could provide the instruments needed to make integration a reality. They point out that the meeting followed earlier progress toward a common development strategy in January's economic summit in Quito and the publication of recent documents by other regional organisations such as the UN Commission for Latin America and the Caribbean (Cepal) calling on Latin America to organise itself economically as a unit.

On the surface, the implementation of a system of preferential tariffs is plagued by potential pitfalls, given the complexity of tariff structures within individual countries.

A three-year period for the lifting of all non-tariff barriers, meanwhile, is recognised by some officials as too ambitious, given the fragile nature of most Latin American economies.

At the meeting, Brazil significantly pressed for escape clauses in the event of continuing balance of payments difficulties.

Aladi recognises three different levels of development among its members. The system of preferential tariffs agreed last weekend were set nominally at 10 per cent for the most developed countries (Argentina, Brazil, and Mexico), 7.5 per cent for intermediate countries (Venezuela, Uruguay, Peru, and Chile) and 5 per cent for the least developed (Ecuador, Paraguay, and Bolivia). The least developed countries will also be entitled to present a larger list of products subject to tariff preference.

Aladi officials believe that the main area of trade to benefit from a properly implemented system of preferential tariffs will be exports of manufactured goods.

Regional trade in these products has grown by more than a third in the past decade and represents over 20 per cent of all Latin American manufacturing exports.

Two areas where the spirit of Aladi appears to have found practical expression is in the commitment to counter-trade and greater intra-regional financial cooperation.

Last month an important counter-trade agreement was signed between Mexico and Argentina, and there have also been recent examples of increased financial co-operation within the region.

In Montevideo, Argentina approached several Latin American countries to seek their co-operation in helping Bolivia out of its financial crisis apparently invoking the spirit of the \$500m rescue package provided earlier for Argentina by Brazil, Mexico, Colombia, and Venezuela.



Arabs woo Japan for support against Iran

By Kathleen Evans in Kuwait

A CAMPAIGN is under way by the Arab states to try to dissuade Japan from buying large quantities of Iranian oil, considered a vital prop in sustaining the Iranian war effort against Iraq.

Latter this month, Sheikh Sabah al-Ahmed, the Kuwaiti Foreign Minister, and Mr Tariq Aziz, the Vice-Prime Minister of Iraq, are to visit Japan representing the Arab League. At a meeting in Baghdad last month it set up a committee to try to persuade Western and industrialised nations to refrain from taking any measures which might lead to the prolongation of the Gulf war.

Japan has become the focus of Arab attention because it is still Iran's top oil customer, despite numerous Israeli attacks on oil shipping. Japanese crude oil imports from Iran last year ran to \$4.2bn and the Iranian market of 36m people is a more promising one for Japan than Iraq. Japanese exports to Iran last year were worth \$2.5bn compared with \$820m in Iraq.

Japanese oil purchases from Iran have declined recently because of difficulties of access for Japanese exports to Iran, and the Iranians are trying to woo the Japanese. Shortly after the Arab League committee was established, Mr Ali Akbar Velayati, the Iranian Foreign Minister, visited Tokyo and asked the Japanese to increase their oil purchases to 600,000 b/d.

But the Iranians made no promises about additional export opportunities for Japan, and last month's crude contracts of 300,000 b/d are likely to decline to 200,000 b/d this month and thereafter perhaps to 150,000 b/d, Japanese officials say.

The Arab states feel that Japan cannot continue to make large oil purchases from Iran while maintaining that it wishes to see an end to the war. The Arabs are not planning to use any hard-balled tactics with Japan but one Kuwaiti official said: "If Japan does not respond, then it must take the consequences."

Economically, the boost is on the other foot. Only five years ago, the Japanese were desperately trying to deepen their economic ties with the Arab oil producers in secure their energy supplies, but the world oil glut has reversed that situation.

The Gulf state of Qatar, for instance, is most eager to maintain Japan's interest in its energy supplies. Without a commitment from Japan for long-term purchases, Qatar cannot go ahead with a large scale liquefied natural gas project to develop its massive North Doha gas field.

Kuwait is also embarking on a campaign to buy into the Japanese market through Mitsubishi Oil. A shareholding may become available with the takeover of Getty Oil, which owns half the company. Kuwait Petroleum Corporation officials have sounded out Japan's Ministry of Trade and Industry, but have been politely told that such a purchase would be "difficult" on the grounds of national security.

Share prices of the stock have nearly doubled since it became known that KPC was interested. Mitsubishi Oil, with its three refineries, a tube oil plant and an aromatics facility, would be an attractive entry into the Japanese market for Kuwait, for the company holds a 9 per cent share of the total market.

The Kuwaiti request has put into question, say Japanese oil men, and a heated internal debate is said to be going on. Some fear that if Japan is adamant about retaining the Kuwaiti access to the Japanese market, then retaliation against the Japanese shareholding in the Arabian Oil Company of Kuwait is a possibility.

Japanese officials say, somewhat hesitantly, that they do not think such a retaliation is in the offing. Nevertheless, Japanese oil men are currently upgrading KPC's chances of gaining its stake in the Japanese market. Even with an oil glut, Japan may still prove to be highly sensitive to Arab wishes.



General Alvarez: warmly applauded speech.

Given the region's heterogeneity, the traditional rivalries between Latin American neighbours and the essentially voluntary nature of Aladi's resolutions, officials remained understandably cautious about the future.

Nevertheless, the unprecedented gathering in Montevideo of 11 foreign ministers and their spirited commitment to joint action in spite of past differences appeared to indicate that the political will for integration was at last materialising.

Paraguayans and Chileans amiably shared views with Argentines and Mexicans, and Uruguay's authoritarian president, General Gregorio Alvarez, was warmly applauded in an impassioned inaugural speech in defence of Latin American solidarity.

Protectionism in Western Europe and the U.S., a realisation that opportunities for trade with the developed world will continue to be limited in the short- to medium-term as recovery remains slow and the prospect that fresh credits from traditional sources of finance are being reduced, appear to be behind the current search for an answer in regional trade.

"We have entered a period in which solidarity in the region has moved from the rhetorical to the concrete, out of sheer necessity," commented Sr Leopoldo Tetzmann, the new Argentine ambassador to Aladi and one of the main architects of the initiative for the Montevideo meeting.

U.S. tax move may cause treaty changes

BY NANCY DUNNE IN WASHINGTON

THE U.S. Government will seek to renegotiate its double taxation treaties with its major trading partners if President Ronald Reagan approves the recommendations of the Administration's working group on unitary taxation, according to senior Treasury Department officials.

The working group's final report, which will recommend that the American states abandon the practice of taxing corporations on the basis of their foreign earnings, is expected to reach the President's desk by the end of the month.

He is expected to accept the group's proposals which attempt to appease the trading partners without forcing a federal solution on the 12 states which use worldwide unitary taxation.

While refusing to endorse federal legislation abolishing the tax practice, the working group managed to obtain the agreement of state governors to a "water's edge" solution by promising to provide increased tax assistance to the states and to share federal tax information.

Existing double taxation treaties forbid the sharing of information provided by foreign governments to the Internal Revenue Service about taxes paid by overseas corporations.

These Treasury officials say, would have to be renegotiated or modified, if the Federal Government is to keep its commitment to the states.

Treasury officials add that they do not expect the states to wait until the treaties are changed before retreating from the worldwide unitary tax. Mr George Deukmejian, Governor of California, has recommended that multinationals be permitted to select the basis on which they are taxed.

On senior Treasury official said it was his interpretation that California and some of the other states could amend their tax practices by administrative action without having to move any changes through state legislatures.

Treasury officials were unanimous in declaring the working group's compromise "a notable success of federalism."

Table with columns: 1983 Dfl. billion, 1982 Dfl. billion, Diff. billion. Rows include Annual Results, Gross receipts life assurance, Gross receipts general insurance, Non-insurance activities, Income from non-group companies, Gross receipts, Figures per Ordinary Share of Dfl.10.00, Net profit, Ordinary Shareholders' funds, Dividend.

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UK NEWS

Health care company in £18m takeover

BY ROBIN REEVES, WELSH CORRESPONDENT

THE INVACARE Corporation of Ohio has acquired Carfers (J. and A.) of Bridgend, South Wales, in a £18m deal designed to assist the U.S. company's entry and expansion in the European market. Both companies make health care equipment.

Besides extending Carfers' range of equipment, such as wheelchairs and walking aids, the new parent company plans to introduce fresh products to the UK subsidiary. It aims to expand employment at Bridgend, from the present 200 to 600 over the next four to five years.

The takeover and expansion is being backed by a substantial selective financial assistance grant from the Welsh Office.

The proposed new products include the manufacture of oxygen concentrators, a less bulky and potentially cheaper method of providing for patients requiring long-term supplies of oxygen than the usual cylinders.

The concentrators use a molecular sieve to extract and concentrate oxygen from the air and can be plugged into a normal domestic electricity supply.

The leading UK oxygen producer, BOC, which has a U.S. subsidiary manufacturing concentrators, estimates that their introduction could save the UK National Health Service up to £2m a year.

This suggestion, together with other aspects of the expanding home medical care sector, is the subject of investigation by chartered accountants Arthur Anderson and Company for the Department

of Health and Social Security. Its report is due to be published soon.

Before the Invacare takeover, Carfers was owned for a short time by another U.S. company, Diasonics, makers of sophisticated hospital equipment.

Mr Donald Karl, president of Invacare, is the new chairman of Carfers (J. and A.).

Raymond Snoddy writes: Monsanto, the U.S. chemicals company, confirmed yesterday that it plans to open a silicon wafer manufacturing plant in Britain.

The investment, which will total between \$50m and \$60m, will be announced next week by Mr Norman Lamont, the Department of Trade and Industry Minister responsible for investment in the UK.

Monsanto refused to say yesterday where the new plant, which will manufacture the silicon wafers used to make integrated circuits, would be located.

Monsanto already employs around 1,800 people in Britain. The products range from intermediates for the manufacture of artificial fibres to rubber-testing equipment.

Mr Earl Harbison, Monsanto's executive vice-president, confirmed that the company was planning a wafer plant for Britain and a further two plants in Asia.

Monsanto produces about \$250m worth of wafers a year at the moment in two plants in the U.S. and one in Kuala Lumpur, Malaysia.

Mr Harbison believes annual sales of the wafers will rise to \$750m within five years as the new plants come on stream.

First sign of break in striking miners' unity

BY PHILIP BASSETT, MARK MEREDITH AND ROBIN REEVES

THE FIRST signs of a crack in the unity of striking UK miners were seen last night, at the same time as supplies of coal to the beleaguered Ravenscraig and Llanwern steel plants began to seem more certain.

Until now, the majority of UK miners have been on strike, apart from most miners in Nottinghamshire and some in other areas. However, the first indications of what could be a revolt came yesterday when miners at the Manton colliery, in the South Yorkshire area, said they wanted to return to work. Miners at the pit, which employs

about 1,320 men, have persuaded the pit's branch president of the National Union of Mineworkers (NUM) to hold a special meeting on Friday to discuss the issue.

Although strong pressure is likely to be put on the Manton miners to maintain strike unity it was not clear last night whether this was an isolated incident or the start of a trend.

Meanwhile, moderate miners' leaders will tomorrow press Mr Arthur Scargill, NUM president, to enter talks with the National Coal Board (NCB) "to see if there is anything on the table". Mr Scargill is likely to reply that the NUM is ready to talk at any time - provided it is not about pit closures.

Mr Ian MacGregor, NCB chairman, yesterday held out the prospect of much higher pay levels in the coal industry if it reduced its loss-making capacity and invested in highly capital intensive pits.

In the coalfields, 2,500 pickets turned up at Pye Hill colliery in Nottinghamshire, and there was some violence in other areas, with reports of a hut being burned

EEC services 'too restricted'

BY DAVID HELLIER

THE EUROPEAN insurance market ought to be freed from unnecessary regulations so that UK companies can benefit from a genuine common market in services, Mr Paul Channon, Minister for Trade said yesterday.

Free trade in services was as much part of the vision of the Treaty of Rome as free trade in goods, he said.

Mr Channon was addressing a seminar on barriers to trade in Europe, organised by the Kangaroo Group, an international, all-party group of Euro-MPs.

He told them that the Community had been very slow to dismantle the

barriers to trade in invisibles the development of trade in financial services within the Community is the differing regulatory regimes adopted by member-states, frequently with the laudable objectives of investor and consumer protection," he said.

Welcome for decision on DBS

BY RAYMOND SNODDY

BRITAIN'S BROADCASTERS yesterday welcomed the decision by the Government to make the necessary legislative changes to allow the £400m direct broadcasting satellite (DBS) joint venture to go ahead.

Mr Leon Brittan, the Home Secretary, cleared the way for the BBC and the ITV companies together with an independent element to begin three channels of satellite broadcasting direct to homes - possibly as early as the autumn of 1987.

Mr Brittan confirmed that he was prepared to postpone the prospects of competition over DBS and give the Independent Broadcasting Authority (IBA) the right to defer re-advertising the franchises of the ITV companies until 1997 to enable investment in a risky venture.

Mr Brittan said that after reviewing the case the Government had decided that the best hope of securing a good quality British satellite service in the late 1980s lay in a joint project.

"Our objective of establishing a British DBS service on a firm footing could be jeopardised if competition for audiences and revenue had the effect of fragmenting them before they were established," Mr Brittan said.

The Government has, however, decided that the IBA can invite applications for a competitor in space three years after the launch of the services of the joint project.

Support for imports of Norwegian gas

BY IAN HARGREAVES

MR PETER WALKER, the UK's Secretary for Energy, has given his backing to a modified version of British Gas's plan to import about £20bn of supplies from Norway's Sleipner gas field.

In a separate development, a parliamentary committee on energy announced yesterday that it would publish a report on the Sleipner question before the end of the month, even though Mr Walker's department has declined to offer evidence on the subject pending its consideration by Cabinet.

In the first indication of his department's views on the Sleipner deal, Mr Walker has circulated a detailed paper to other departments.

The suggestion that British Gas should be allowed to complete its negotiations with Statoil of Norway, but that it should press for a smaller off-take of gas than envisaged in the existing draft contract.

The paper makes one further concession to the position of the Treasury which has been vigorously contesting the need for the Sleipner deal, by agreeing that the current ban on the export of UK gas should be reviewed in the light of any agreement on Sleipner.

It does not, however, touch on what the Treasury sees as the crucial issue - that of price. The Treasury is arguing that only if British Gas agrees to a substantial increase in its prices to consumers will it be able to justify the \$4.10 to \$4.25 per million BTUs price involved in the Sleipner contract.

It believes a phased 20 per cent increase in gas prices can be justified to set British Gas's pricing policy on an economic basis.

The timetable for a decision on the Sleipner deal remains uncertain.

Plans announced for 17-plus qualification

BY MICHAEL DIXON

ALTERNATIVE COURSES in schools to prepare 16-year-olds for working life instead of academic examinations were announced by Sir Keith Joseph, Secretary for Education and Science, in London yesterday.

Outline plans for the full-time courses lasting a year and leading to a new 17-plus qualification have been drawn up by a joint board of the Business and Technician Education Council and the City and Guilds of London Institute, headed by Sir Edwin Nixon, chief of IBM UK.

Employers and educational interests are being invited to join in working out the detailed arrangements with a view to making the courses available from September 1985.

Points still to be decided include the name of the 17-plus certificate

which will be awarded to all who complete the one-year programme, noting only their successful achievements.

At first the courses will serve as a school or college-centred alternative to the Youth Training Scheme (YTS) run by the Manpower Services Commission. But part-time versions, perhaps operating in conjunction with the YTS, may be introduced later.

Although the programmes are nominally open to all 16-year-old pupils, Sir Keith does not expect them to be taken by academically inclined children in preference to studies for the Ordinary and Advanced-level exams.

At least three quarters of the programme will be spent in broad vocational studies, where possible, including experience of work, and a common core of related activities.

Nuclear inquiry warned of delays over safety

FINANCIAL TIMES REPORTER

THE INQUIRY into the building of a pressurised water reactor at Sizewell in eastern England would not end before significant progress was made on resolving outstanding safety issues, the counsel to the inquiry, Mr Henry Brooke QC, warned yesterday when the hearing resumed.

Mr Brooke was commenting after the Central Electricity Generating Board has reported continuing delays in making submissions to the Nuclear Installations Inspectorate, the UK nuclear safety organisation.

Lord Silsoe, the board's leading counsel, reported that only eight out of 19 submissions planned for the period up to the end of April had been made. He said most were now expected later this month.

Sir Frank Layfield QC, the inquiry inspector, questioned the latest forecast, but Lord Silsoe said he could only state that they were intended dates.

Mr Brooke warned that if delays in settling important issues continue, the "imaginary" date on which the inquiry would end would have to be put back.

He said the inquiry had served notice that the board and the inspectorate would be available for full cross-examination on the details of agreements on certain major issues.

These include the risk of an earthquake endangering the safety of the proposed plant, the risk of an air crash and the segregation of emergency systems.

The inquiry began in January last year and at the present rate of progress is not expected to be completed before December.

The CEGB announced at the inquiry yesterday that new design changes would increase the cost of Sizewell B by a further £1.6m.

The total increase in costs caused by design changes since original plans were published two years ago has now reached £13.6m.

The board has said it can build the proposed American-style PWR for around £1.2bn, less than the cost of either a British-designed advanced gas-cooled reactor or a coal-fired station with a comparable output of electricity.

MANAGEMENT AMIDST DIVERSIFICATION

# SEEKING TO BE A TRULY INTERNATIONAL COMPANY

Sir Peter Parker, Chairman, Mitsubishi Electric (UK) Ltd.

By Geoffrey Murray

If there is an electrical connection somewhere, then there's a very good chance the name Mitsubishi Electric will appear on the product—everything from colour television sets and small computers to giant steam turbine generators, lifts and underground trains.

The dramatic progress in electronic technology in recent years has provided the company with major opportunities for diversification, expanding the product range to produce a synergistic effect.

The Mitsubishi Electric management has now targeted five key areas for future emphasis and expects high growth. First, they are using the expertise gained in Mitsubishi's own highly advanced factory automation to develop a whole range of computer-integrated manufacturing systems to fit backyard family operations through to multinational industrial complexes. In data-processing it has been putting a major emphasis on software for small business and general purpose computers. The company sees big possibilities in communications systems. It is extremely active in Japan's space communications programme, helping to build both the satellites and ground receiving stations. The focus target area is "audio-visual", using such products as digital audio discs to make the home a terminal in several countries. Finally, it is placing a strong emphasis on electronic devices, developing amongst other products, very large scale integrated circuits (VLSI) using new materials. The other key target for Mitsubishi Electric is to become a truly international company at home anywhere in the world. In the last fiscal year, overseas operations contributed 26 per cent of the company's net sales. This was an increase of almost 40 per cent from the previous year. The management emphasis is now on more overseas production rather than simply sales of products made in Japan. There is a strong desire to make each overseas operation self-supporting, even to the extent of developing its own research and development function. A major step forward in the internationalisation programme was the appointment from January this year of Sir Peter Parker, former Chairman of British Rail, as Chairman of Mitsubishi Electric (UK) Ltd. In the following interview, Sir Peter Parker discusses his reasons for accepting the appointment and how he sees his role in the company as a bridge between Britain and Japan.

"Hesitation"

Murray: I gather there was some hesitation on your part about agreeing to join Mitsubishi Electric.



Parker: Well, it certainly was not because Mitsubishi is a Japanese company. I have always had an interest in the East, having lived in China for six years as a boy and having been in Japan for a while immediately after the war ended. At one time I could read and speak Japanese quite well and I am now trying to polish up my old skills. No, the reason for my hesitation was that I was not interested in being merely window dressing, for example. If there was a real task, a job that was relevant to the future prosperity of both countries, then I was interested. Before joining Mitsubishi Electric, I had a chance to visit Japan and talk with the management at the highest level. They explained their policy and future objectives to me and I was extremely impressed by their international realism. My appointment is an innovation. It's highly significant in that this is the first time they have ever brought in a different national to head one of their overseas operations. The Mitsubishi Group has obviously seen that the way forward to promote their policy of greater internationalisation is to establish local realities and identify with the local community in managerial terms. I regard this job as a very significant challenge.

"Triple Role"

Murray: Specifically how do you see your role in the company's operations? What do you want to achieve in the short and long term?

Parker: I personally see my role in three ways. First, I see it as nourishing and encouraging Japanese investment in the UK and in Europe. Second, I see it as developing a technology partnership between Japanese and British industry for the mutual benefit of both. Third, I see it as a useful opportunity to collaborate with UK groups who are selling in the developing markets of the world. This fits in with Mitsubishi's "networking" policy. The management in Japan does not believe the company can do everything by itself, nor is this desirable. There is a strong desire to have mutually beneficial tie-ups with private design groups, laboratories, universities, etc., to promote long-term R and D. There is a need for further interpretation between East and West in terms of trade. This is a very important frontier to be on and I take the job of helping to open it up as crucial priority for the coming generation. It is absolutely vital for an international group to become a part of the community to operate in and serve.

Murray: What are your first impressions of the job in practical terms?

Parker: There has to be clear autonomy in national and regional operations. There is some way to go and I am taking a quiet look at the problem by visiting the various local operations and commercial centres here and in Europe... Dublin, Paris, Stockholm, Amsterdam, Dusseldorf, for example. In the UK, we have the consumer division with a factory employing 250 at Haddington in Scotland. This has been a very big success for both Mitsubishi Electric and for the Scottish people. Another factory is being opened at Livingston and I am sure this will be equally as good. Recruiting is certainly not a problem... There is a certain magnetism about working for a major international company. The operational performance in Scotland has been first class, and we have also been able to obtain very qualified management people and technologists to promote our home-grown R and D programme. There is a major commercial base at Croydon, handling civil engineering, electrical and mechanical engineering, with some 50 British personnel and five Japanese. There is the industrial appliances/telecommunications area, which is very active marketing satellites and other communications related equipment. All these local activities are deeply involved with British industry, in a partnership with a wide range of UK companies which I want to further encourage.

"Switch to Electronics"

Murray: What do you regard as the most significant development in the company's operations?

Parker: Mitsubishi Electric has a very confident, long-term view of itself. Stretching some 20 years ahead. That is, it wants to shift from the heavy to the light electric industry. I believe this is right and I am doing all I can to encourage this transition. There is no question that the company is now thrusting hard into the electronics side, swinging very hard to concentrate on factory automation, data processing, audio visual, communications equipment and electronic devices. I think we have to be very open-minded in this and be keen to make new contacts, explore every possibility in the area of high technology, Mitsubishi Electric has been rather strongly connected with American business interests for a long time. I want the European side to be as competitive as its American counterpart.

Murray: What is your own personal business philosophy and how does it fit in with Mitsubishi Electric's overall objectives?

Parker: Briefly, I have always believed that, whatever the business, it is vital to organise people into as small groups as possible. It is in small groups that we really begin to be real to one another, objectives can be seen clearly, differences and difficulties faced and thrashed out. One of the reasons the Japanese now enjoy such a healthy success in the business world is that they dare to share problems and they dare to listen to the opinions of other people. The Japanese discuss a problem at many different levels. This takes time, but it does mean that when they do move, they move fast and as one. In Western industrial societies, we find our industrial purpose separate from the social purpose—this split has weakened us. There is no question of the West simply trying to copy Japanese society. That would be neither possible nor desirable. But the unity of industrial and social effort has made Japan formidably successful worldwide.

Murray: Do you see your role in a broader sense than just working for one company?

Parker: Yes, in a way... Britain and Japan are both great leading nations. Some real problems exist between them and it is important that both sides see these problems in real terms. There is a need for someone with a foot in both camps during this transitional period—and I am certainly hoping to make a worthwhile contribution in this regard. I think that both Britain and Japan have to learn from each other and this need has become quite pressing in the present environment of trade problems and protectionist talk. I think this has to be done on various levels, with a strong emphasis on the individual. At a corporate level there is certainly a lot that Mitsubishi Electric can do and is already doing in this regard. One of our current tasks is to recruit the most promising young people and send them off to Japan immediately for an extended period of study so that they can gain an in-depth experience of the Japanese way of thinking and working. The Japanese deliberately isolated themselves from the rest of the world for a long time in their history, and I think they still have trouble linking up with other countries. So, there is also a need for young Japanese to study and work in the West to develop the free flow of ideas and understanding. This is how over the years strong connections between Europe and the United States were reinforced and I would like to see Europe doing a lot more in this regard towards Japan now. My purpose in joining Mitsubishi Electric, therefore, was twofold; to promote industrial cooperation between Japan, Britain and other parts of Europe, and to encourage on a personal plane a greater understanding of each other's points of view. I think Mitsubishi Electric's desire to become a truly multinational corporation will play a very important role in this from now on.



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**AEGON**  
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Shareholders are invited to attend the Annual General Meeting of Shareholders to be held in the "Residentieaal" of the Promenade Hotel 1, Van Stolkweg, The Hague at 2.30 p.m. on May 25, 1984.

**A G E N D A**

1. Opening of the Meeting.
2. Minutes of the Meeting of 17th November 1983.
3. Report of the Executive Board on the 1983 financial year.
4. Reading and approval of the annual accounts for the 1983 financial year agreed by the Supervisory Board.
5. Announcement of the results for the first quarter of 1984.
6. Retirement and appointment of Members of the Supervisory Board.  
In 1984, Messrs. G. Gerritse, A.S. Nolst Trenité and K. Wetherell are due to retire by rotation.  
The Supervisory Board has resolved to reappoint the aforesaid Members of the Supervisory Board unless the Meeting of Shareholders exercises its right to make other recommendations or raises objections to these reappointments.  
The Workers' Council has made no recommendations and has also announced that the Council has no objections to these reappointments.
7. Vacancies on the Supervisory Board in 1985.  
Due to retire at the Annual General Meeting of Shareholders in 1985 are Messrs. R. van den Bergh, W.A.J. Bogers, J.R.M. van den Brink, E. ten Duis, H. Gerritsen, G.F. Hepkema and W.H.J. Reynaerts.  
Messrs. Van den Bergh and Gerritsen, having attained the statutory age limit, will not be eligible for re-election.  
The Supervisory Board propose to reappoint Messrs. Bogers, Van den Brink, Ten Duis, Hepkema and Reynaerts.
8. Appointment of auditors.  
It is proposed to reappoint Moret & Limpert.
9. e. Appointment of the administrative organ of the company empowered to issue shares and to depart from the preference right of Shareholders.  
b. Authorisation to acquire Company shares or BDRs for a consideration.
10. Matters arising.
11. Any other business and conclusion of the Meeting.

Copies of the documents relating to the business of this meeting are available to Shareholders free of charge, in The Netherlands from the offices of the Company at The Hague and Amsterdam, in The United Kingdom from the office of Ennia Holdings (UK) Ltd. at London and in Switzerland from the office of Schweizerischer Bankverein at Zurich.

The Executive Board,  
The Hague, May 3, 1984  
1, Churchillplein

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Our home is Holland. - Our market is the world

**UK NEWS**

John Moore and John Edwards look at moves to improve investor protection

**Mixed response to Gower plans**

WIDE-RANGING proposals for improving the protection of investors in London's financial community, outlined in a Government-commissioned report, have received a mixed response from pension funds, accountants, futures brokers and investment trusts.

Through their associations and representative bodies City of London interests are responding to an invitation by Mr Norman Tebbit, Secretary of State for Trade and Industry, to submit their observations on the report on investor protection, prepared by Professor Jim Gower, the Department of Trade and Industry's consultant research adviser on company law. The report was published in January.

Prof Gower, in his proposed structure for improved regulation of the City, said that the Trade Department should have sweeping powers to approve the establishment of self-regulatory agencies which would be responsible for regulating investment activity. It should be an offence for anyone engaged in investment business to trade without first registering with a self-regulatory agency or the department.

Prof Gower envisaged that the Council for the Securities Industry, which is fighting to become the City's main regulatory body, should have a co-ordinating role between the Trade Department and the self-

regulatory agencies which would be established.

The Association of Futures Brokers and Dealers, a self-regulatory agency which is being formed by London's five commodity and financial futures exchanges, said it wants changes in the law to enable it to act quickly to safeguard investors' interests and wants powers to appoint receivers when necessary.

While backing Prof Gower's recommendations for the creation of a number of self-regulatory agencies, the association opposes the suggestion that the Council for the Securities Industry should play a major role in supervising the agencies. It claims that the council has no experience or knowledge of the futures markets.

Instead it recommends that the supervision of agencies should be handled either by the Bank of England or the Trade Department - possibly through a specially appointed commission.

The association says that this would help avoid unnecessary proliferation of organisations. It also argues that the idea of recognising investment exchanges should not be encouraged.

The National Association of Pension Funds said that it welcomed Prof Gower's attempt to strengthen the measure of protection afforded to investors without resort to full statutory regulation.



Mr Norman Tebbit

The pension funds' association believes that it would be "right and proper" for all individual in-house managers and advisers to register themselves under the proposed regulatory framework.

The association is conscious that others concerned with the management of funds will need to be regulated by a pensions self-regulatory agency.

The Consultative Committee of Accountancy Bodies believes that the Gower proposals would open the way for unnecessarily detailed intervention by Government into the conduct of investment business which will increase bureaucracy both in Government and the City.

It considers that Prof Gower "has seriously underestimated the blunting effect that the consequent ad-

ministrative burden will have on the competitive nature of UK investment markets."

The accountants urge that if the definition of an investment business is extended to include those giving advice exemption should be given for professionals such as accountants and solicitors giving investment advice only as an incident to their primary activity.

The Association of Investment Trust Companies, representing the investment trusts, argues that a supervisory body, which might be called the Council for Investor Protection, should be formed. "It would be logical for the Council for the Securities Industry to adopt the role of the Council for Investor Protection, but to do this its membership and character would have to be changed.

The council should be formed of representatives of self-regulatory agencies with a significant number of lay members to command public confidence in its independence and impartiality. It argues that if a supervisory body were formed there would be no need to set up a separate commission.

The association does not consider it necessary to form a separate self-regulatory agency for investment trust managements, but would help and support wider based self-regulatory agencies covering this activity.

**Call to phase out securities council**

By John Moore

THE UNIT Trust Association has told Mr Norman Tebbit, the Secretary of State for Trade and Industry, that the Council for the Securities Industry should be phased out when new proposals for investor protection are introduced.

Powerful opposition is now building up against the continuation of the council in any form once proposals suggested by Professor Jim Gower for improved investor protection are implemented.

The council has been fighting to play a major role in any new regulatory structure implemented by the Government. In its six years of operation the council has been under attack from all quarters of the City as ineffective and unnecessary.

In its own submissions on the Gower proposals to Mr Tebbit the council, formed of representatives from City interests, indicated that there was division among its own membership about its role. Both the Accepting Houses Committee, representing leading merchant banks, and the Issuing Houses Association have indicated that they foresee a different structure of self-regulation as envisaged by the council.

**Survey sees fresh threat of inflation**

By David Hellier

THE UK's long-term economic outlook may be endangered by wage and price inflation, lack of skilled labour and supply delays, the London Chamber of Commerce said yesterday.

The chamber claims that there is fresh evidence of the kind of economic ills that have put a check to recoveries in the past, although the overall short-term prospects look encouraging.

Business in the South-East of England is generally emerging from the recession lean and optimistic, according to the chamber's latest quarterly economic report and survey. However, the problem of unemployment remains and there seems little sign of any short-term improvement.

The survey, carried out from a sample of 300 companies based in the South-East, indicates that businesses are concerned about increased competition and are exposed to the dangers of inflation.

The chamber says that, in dealing with cost inflation, there is a growing tendency to pass on costs in increased consumer prices with fewer companies attempting to deal with the problem through tougher wage bargaining.

It hopes that the reductions in business costs stemming from the recent Budget, particularly from the abolition of the National Insurance surcharge, will go towards price reductions rather than into fuelling higher wage inflation.

The survey shows that most manufacturers are pulling out of recession into a much tougher business climate, and that there is optimism based on increased domestic orders and inquiries. However, apart from a few larger companies, the growth of export orders has lagged behind.

The home market is proving more favourable, with 50 per cent of the companies surveyed reporting increased domestic orders, the bulk of these going to the chemical, metal and paper industries. Other sectors have maintained their previous positions.

There is some good news on employment. Many companies, particularly larger ones, are shifting towards investment programmes which could create jobs in the long-term, rather than simply replacing existing plant and equipment, says the survey.

The completion of the M25 London ring road will help business in the area by providing easier and quicker access to the national motorway network.

It says the industry had consistently improved the quality, marketing presentation and pricing of its products and was rated very highly in world markets, achieving over two-fifths of its sales abroad.

The industry's main problem remains strong competition from manufacturers in developing countries. The federation has been seeking government support for measures to stop dumping and the import of substandard and counterfeit product imports.

A year ago, the federation suggested that British manufacturers in search of products to complete their ranges of tools should try to obtain them from other British manufacturers rather than foreign suppliers.

The industry's sales totalled £220.8m last year compared with £204.2m in 1982. Imports rose from £38.2m to £39.3m, while exports fell from £104.9m to £38.7m. The British market for hand tools was worth £224.1m in 1983 compared with £186.9m in 1982.

By Andrew Taylor

THE PACE at which UK house-builders are starting work on new homes has slowed as the number of new houses coming on to the market rose sharply during the first three months of this year.

The number of starts made by housebuilders on new homes fell by 8 per cent during the first three months of this year compared with the corresponding period in 1983, according to figures published yesterday by the Environment Department.

The figures show that over the same period the number of new homes and flats completed by builders rose by 16 per cent.

The rise in completions follows an upsurge in housebuilding activity since 1982. Last year starts made on private homes rose to 167,400 - the highest level for ten years. Builders, however, have warned that the pace of new building is likely to slow in 1984 as the market

seeks to absorb the larger number of completed houses.

Private sector starts during the first three months, although 4 per cent higher than in the previous quarter, were 7 per cent lower than in the corresponding period in 1983. Completions, however, were 8 per cent higher than in the previous quarter and 22 per cent higher than a year ago.

Public sector starts were 35 per cent higher than in the previous quarter but 14 per cent lower than the corresponding period in 1983. Completions were unchanged compared with the previous year but 6 per cent lower than in the preceding three months.

It is provisionally estimated that 16,600 houses and flats were started in Britain during March compared with 20,100 in the same month last year. Completions in March, however, rose to 16,900 compared with 15,700 last year.

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## THE MANAGEMENT PAGE

EDITED BY CHRISTOPHER LORENZ

FEW OF Japan's high-tech feasts have more impressed and disconcerted its Western competitors than the dramatic rise of its microchip industry. In only five years, its manufacturers have seized world leadership of the \$400 market for mass-produced "standard" memories, the most widely-used type of microelectronic device.

The springboard for that achievement—and for many of Japan's recent advances in computing—was a \$300m four-year research programme launched in 1976. Known as the Very Large Scale Integrated (VLSI) Semiconductor Project, it resulted from a government initiative which brought together five large Japanese electronics manufacturers in an R&D "association."

An intriguing analysis of how the programme got started and why it worked so well has emerged in an unpublished paper by Kiyonori Sakakibara, a visiting scholar at the Alfred P. Sloan School of Management, part of the Massachusetts Institute of Technology.

Its appearance coincides with efforts in many Western countries — partly inspired by Japan's example — to stimulate advances in electronic technology through collaborative R&D programmes. Such projects include the EEC's Esprit, Britain's Alvey directorate and the U.S. Microelectronics and Computer Technology Corporation (MCC).

Sakakibara's central thesis is that the key to Japan's VLSI programme — and to all other ventures of its type — is to be found in the management and motivation of the team chosen to spearhead the R&D effort. In his view, these factors count for much more than the more easily quantifiable contributions of money and technical resources.

The VLSI programme was simply — though by no means passively — funded. Its annual budget averaged \$72m, several times more than the five companies together were then investing in semiconductor R&D. But it was about the same as Texas Instruments, the largest U.S. component supplier, was already spending on its own.

Furthermore, the Government put up less than half the funds, and they only as repayable interest-free loans, not outright grants. But the incentive was enough to persuade the five companies reluctantly to submit to unusually firm official direction of the project, or "a bureaucrat's blueprint," as Sakakibara puts it.

Though Japan's electronics industry had already collaborated in government-backed



Despite early friction among the researchers an esprit de corps soon developed

## 'Management by whisky'

Guy de Jonquieres explains the success of a co-operative Japanese R&D project

research, the VLSI programme broke new ground by establishing a single "co-operative" laboratory, staffed by researchers seconded by the five companies, to do the basic R&D work. Previously, companies had always divided up the research.

The companies resented the arrangement at first. They complained about the tight government control and as fierce commercial competitors, they were prone to acute mutual suspicion and squabbling; it took them six months just to agree a site for the co-operative laboratory.

Similar friction beset the laboratory's 100 researchers—at least for the first few months. In Sakakibara's view, the credit for turning them into a disciplined and highly effective team is largely due to one man: Masato Nebashi, the VLSI association's managing director.

While the head of the laboratory, Yasuo Tarui, concerned himself with technical matters, Nebashi concentrated on what he called "the human problem."

A retired civil servant with much experience of project

management, he clearly possessed remarkable talents for patient leadership.

From the outset, he urged them to air their grievances and inhibitions openly, deliberately encouraging confrontation at a way to break down social and professional barriers. He also impressed on them that they were an elite, charged with a special mission, and that their performance was of keen interest worldwide.

"I wanted them to become good friends, communicate to each other and open their hearts," Nebashi recalled later. The method he chose was, by his account, typically Japanese — but to a Western eye, delightfully unorthodox. "All I did for these four years was to drink with them as frequently as I could."

One researcher described Nebashi's style as "management by whisky." Gradually, an esprit de corps developed as members of the team met night after night to fill their glasses and empty their souls. By the end of the project, many had become firm friends, and an alumni association was formed,

with its own newspaper.

Sakakibara concludes that the programme embodied two elements essential to any innovative research project. First, open communication at all levels between its participants. Second, the creation of an "institutional" environment.

The co-operative laboratory, which was an organisation at first, became an institution by the leadership of Nebashi. He embodied the association's values; he infused it into the hearts of the researchers; he gave it the distinctive character; he lent it a social integration that went well beyond formal co-ordination and command."

All this sounds remarkably similar to the elusive concept of "corporate culture" currently much in vogue in large American companies. The question which Sakakibara's paper begs—but does not really attempt to answer—is whether the magic formula can be transplanted to other joint R&D projects—both in Japan and elsewhere.

By implication, however, that may be difficult. Sakakibara identifies several factors which favoured the VLSI programme. One was timing; it was launched just as the technology was moving out of the U.S. sophisticated conceptual innovation, most of which had taken place in the U.S.

That left engineering implementation as the real challenge, and one particularly well-suited to the carefully co-ordinated group approach at which Japan excels. About a third of the VLSI association's funds were spent on importing from the U.S. sophisticated microchip manufacturing tools.

Perhaps even more important, the VLSI programme had a very simple and well-defined purpose. It set out to catch up with what U.S. industry and IBM in particular was already doing.

By contrast, many of the more recent collaborative R&D ventures have much more ambitious—even nebulous—objectives. Several, including Japan's 10-year project to develop an "intelligent" Fifth Generation Computer and Britain's Alvey scheme, aim to extend the frontiers of computer science.

Indeed, many Japanese scientists see the Fifth Generation Computer project as a test of whether they can make a quantum leap from improving on other people's ideas to pioneering fundamental innovations.

"From Imitation to Innovation: The Very Large Scale Integrated (VLSI) Semiconductor Project in Japan," by Kiyonori Sakakibara, October 1983, Warwick University Library, Working Paper WP 1490-83.

## How Humberside Social Services got rid of its administrative 'mishmash'

BY NICK GARNETT

THE DUPLICATION and spawning of unnecessary layers of management through which decision-making is forced painfully to seep is the food and drink of bureaucratic structures.

Such, until recently, has been the experience at Humberside's Social Services in the North-East of England. Last month, however, the organisation was torn apart and replaced by one in which rigid and almost separate vertical lines of communication are giving way to a horizontal line of neighbourhood teams supervised by a slimmed-down management.

### Bureaucracy

In the process, which is still the subject of concern and suspicion among the unions in spite of their acceptance of the system's improved efficiency, a layer of senior management has been removed.

Changes in Humberside County Council's social services department, which employs 3,600 full and part-time staff with an annual revenue budget of £35m, reflect a broader trend within local authorities to experiment with ways of bringing services to the "customer."

Humberside's Social Services are not a bureaucracy in the sense that a large part of the labour force are front line "shopfloor" staff — people who deal directly with the public like social workers, those bandaged physically and mentally handicapped, home helps, child care workers and the staff running day centres and residential homes.

But decision-making and administration is channelled through a bureaucratic mechanism and it was this which the Labour-controlled county council wanted redesigned.

This has been done under David Peryer, the county's social services director, though it will take a few years before it is fully functioning.

A former lecturer in social administration who entered local government only seven years ago, Peryer was involved with the restructuring of services in East Sussex three years ago and the haste of that initiative has been used in Humberside.

Under the previous system Humberside, whose biggest urban centres are Hull, Grimsby and Scunthorpe, was split into four divisions.

Each had a divisional director and three assistant directors at headquarters, together with four principal officers, one each for the separate management lines supervising field staff those involved with residential care, day care staff and administrative personnel.

Below those officers was a layer of 50 principal assistants and three separate vertical chains of command for people in the field (area managers down to social workers), residential workers (senior residential officers down to heads of homes) and day care. Each of these vertical structures had its own administrative arm dealing with personnel, salaries and recruitment.

The National and Local Government Officers Association accepts that this was a cumbersome and inefficient system.

With two layers of management between the divisional director and the people running residential homes it was unclear whether one layer — the principal assistants — were advisors or line managers or whether they had any real role at all.

The split of management responsibility between the three empires of fieldwork, residential and day care resulted in a

cumbersome system of discussion and negotiation.

For example, if a social worker visiting an elderly woman decided that she needed more assistance in the home, she could also benefit from attending a day care centre, but that she would soon need to enter a home permanently, that social worker might have to talk separately with three administrative sections in different offices.

Peryer says it was too easy for the "ownership" of an individual case to become blurred between sections. They don't like to admit it but local authorities also "lose" people completely in administrative jungles.

The new structure — known as Patch — which has just come into effect involves 45 locally based teams grouped in eight districts. Each team generally contains social workers, heads of homes, home helps and so on who can now talk to each other directly without having to shout over the fences erected between vertical frameworks.

Each team has a team manager. Each district also has a district manager acting as a line manager for a handful of team leaders.

With no staff other than a secretary, the district manager is also responsible for maintaining links with schools, the police and other parts of the community, a liaison job which before, Peryer says, was a "mishmash."

The structure now has three assistant directors for each of three districts, together with an assistant director for both finance and personnel and one responsible for principal officers at head office.

Four principal officers are now responsible for the elderly, children, mentally handicapped and what are termed special projects and there are two

further officers for general administration and training.

Peryer says the new structure removes one management level, provides a clearer line of accountability, brings the management of services together at local level and simplifies administration. People think they should hold onto advisors but here now everything depends on line managers, says Peryer. "Services are brought closer to the public and to other groups in the community."

The council says that the re-organisation should lead to yearly savings of £140,000. The cost of the system will be higher in the first few years though because of the extra lump sum cost of the system will be higher and the protection of salary levels for those moving into lower grade jobs.

It will take some time, however, before all the neighbourhood teams have their own premises. Ken Young, East Sussex's social services director, now has 35 of his 45 teams placed in the community after two and a half years. He says the scheme there is benefiting the public and has greatly simplified administration.

### Suspicious

Sid Cunliffe, Naigo's Humberside branch secretary, says that the old structure had a good deal of inefficient duplication built into it. Staff were concerned, though, that the council was not matching restructuring with extra money and were suspicious that parts of the Patch system would not work out as well as the theory suggests.

"We've reserved the right to discuss and review the system in a year's time, though we do hope it works," Cunliffe says.

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Finance for the non-financial executive, London, June 12-13. Fee: Members of London Chamber of Commerce & Industry £132; £19.80 VAT. Non members £165 + £24.75 VAT. Details

from London Chamber of Commerce and Industry, 69 Cannon Street, London EC4N 5AB. Tel: 248 4444 Telex 888941.

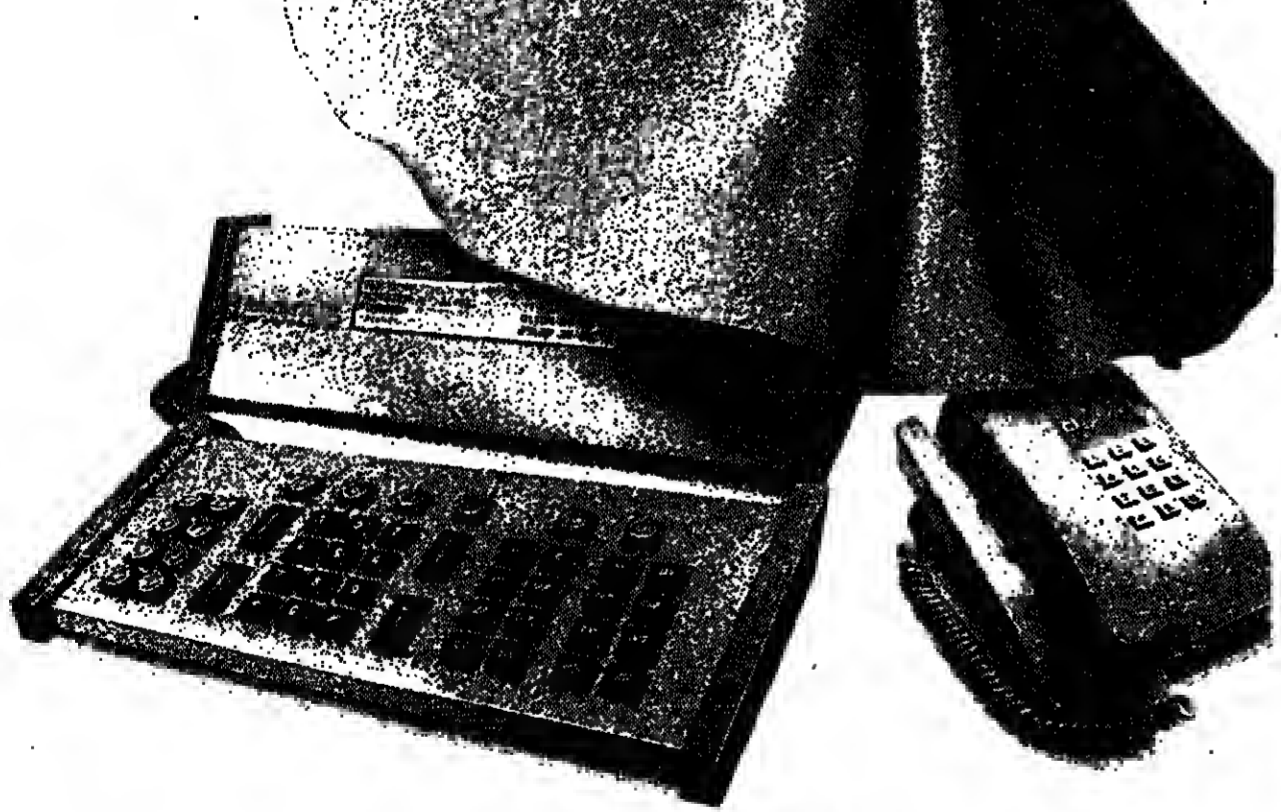
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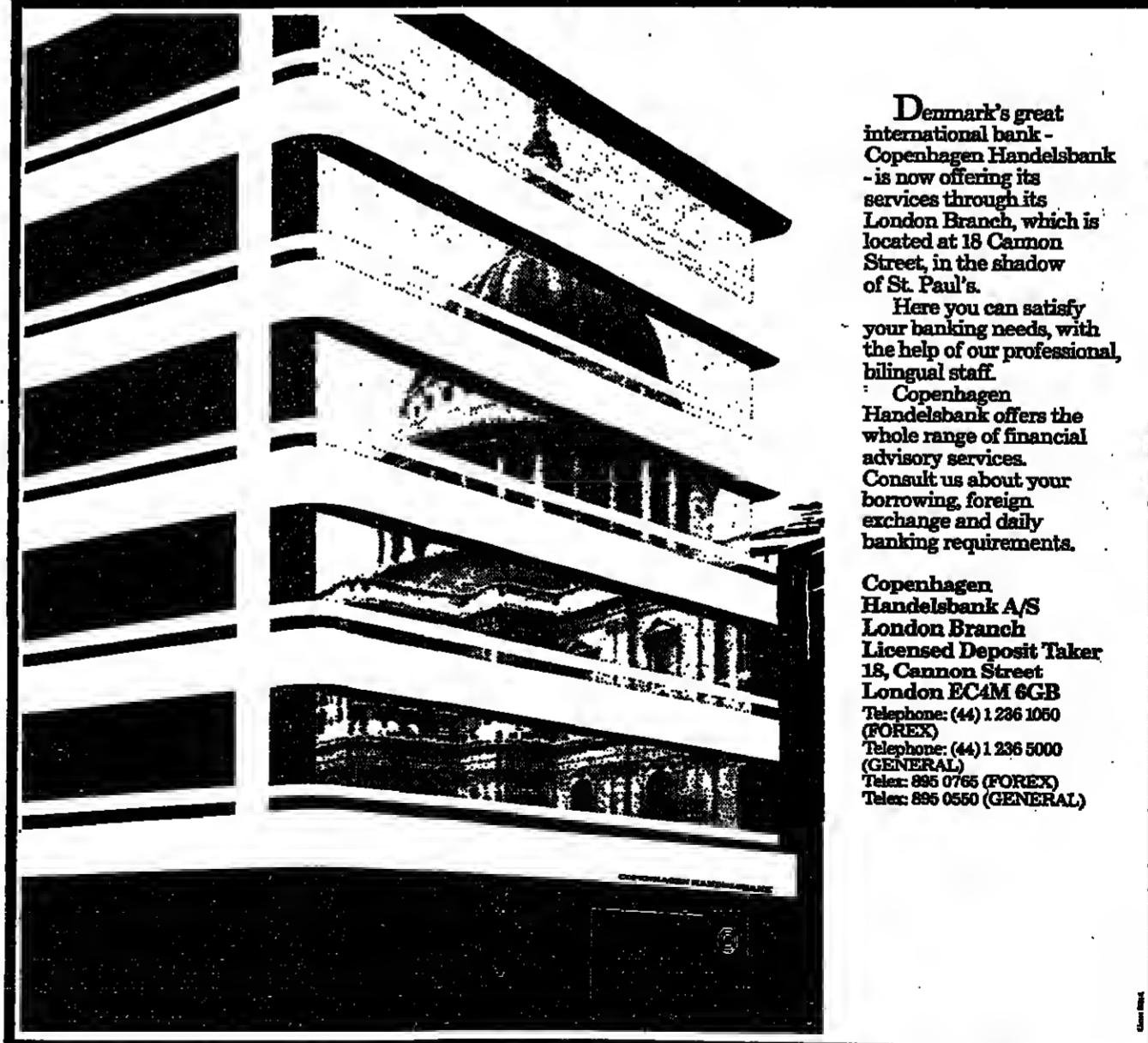
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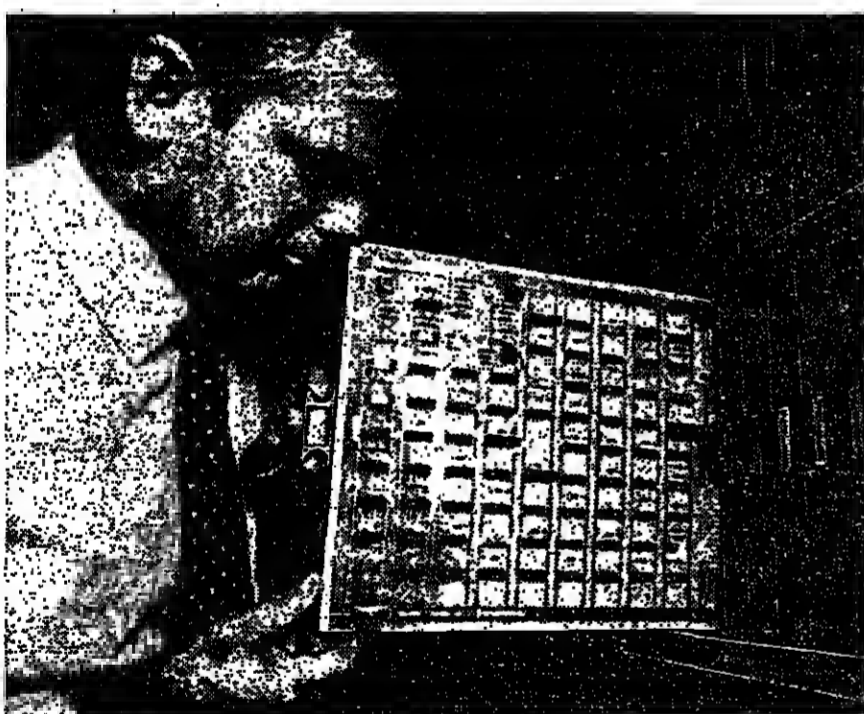
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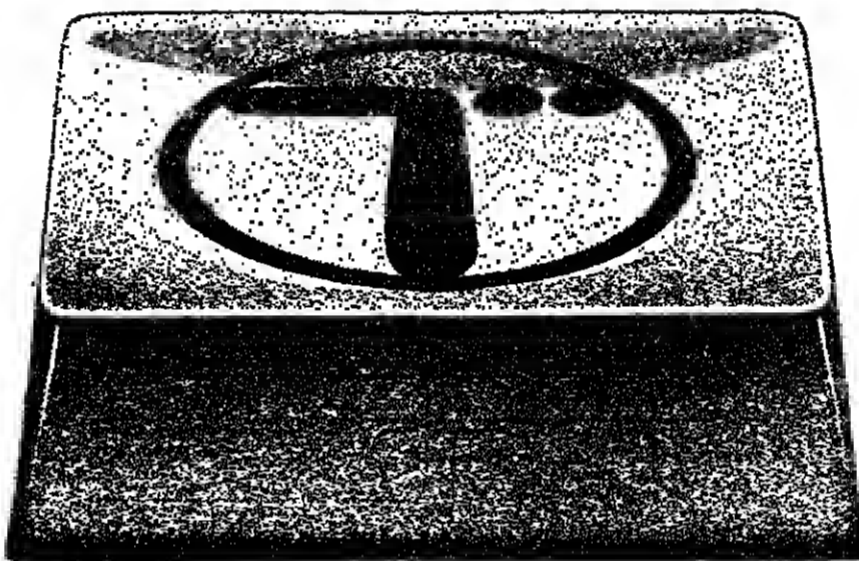


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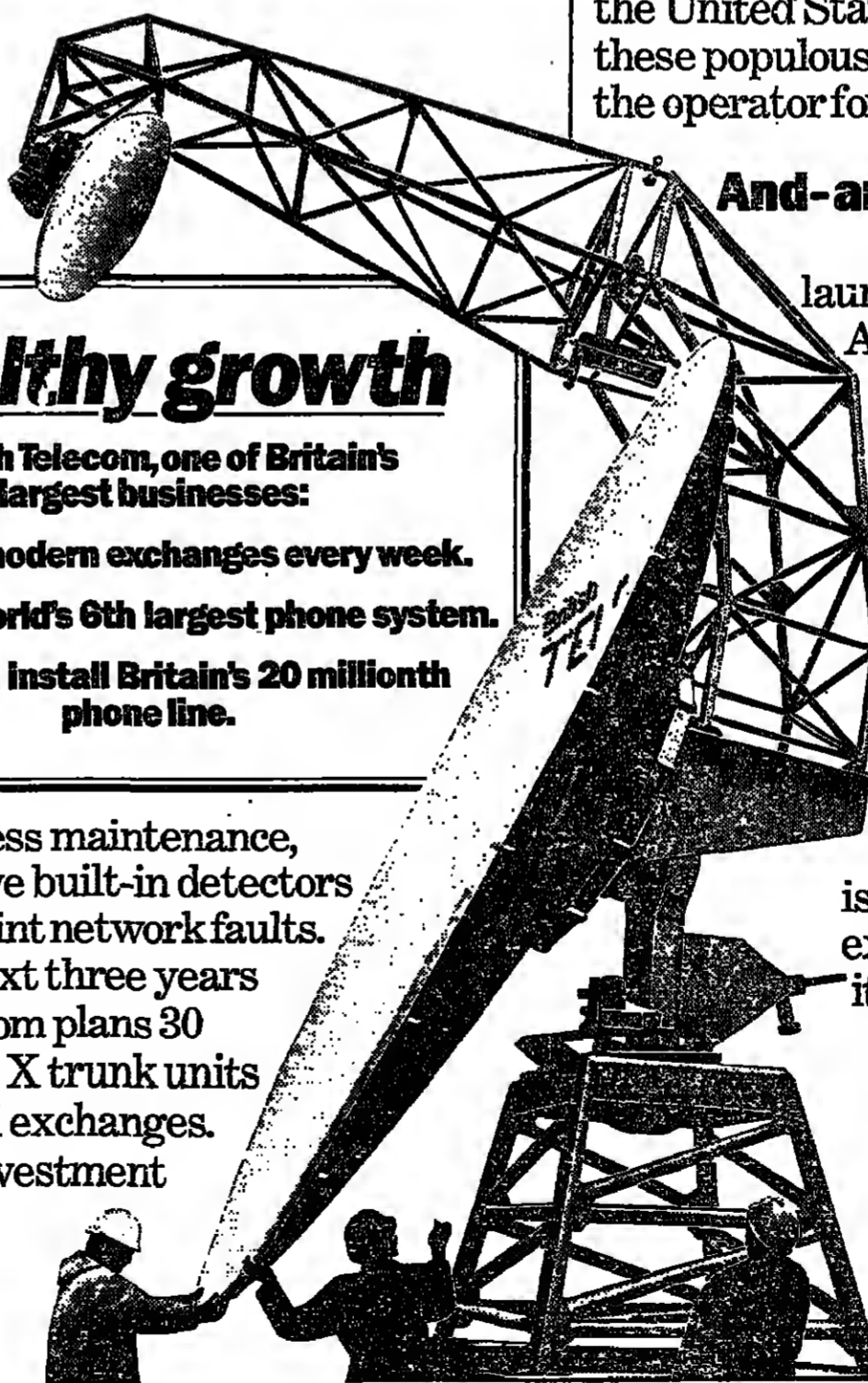
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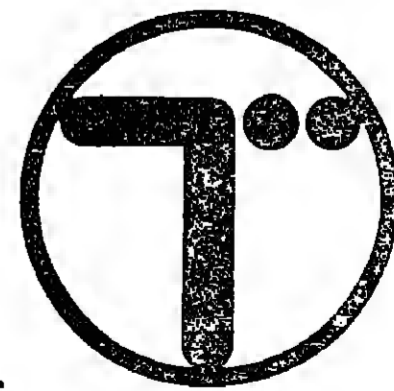
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YACHT CHARTER advertisement: 'LUXURY AMERICAN MOTOR YACHT'.

COMPANY NOTICES advertisement: 'TOKYU DEPARTMENT STORE CO. LTD. Notice to EDR Holders'.

CONTRACTS & TENDERS advertisement: 'PUBLIC ESTABLISHMENT OF ELECTRICITY CALL FOR OFFERS No. 1540'.

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CONTRACTS & TENDERS advertisement: 'PUBLIC ESTABLISHMENT OF ELECTRICITY CALL FOR OFFERS No. 1540'.

New directors at Ransomes Sims advertisement: 'Joining the main board of RANSOMES SIMS AND JEFFERIES'.

COMPANY NOTICES advertisement: 'JACKSON EXPLORATION has appointed Mr George Williams and Mr Lloyd Ryman'.

COMPANY NOTICES advertisement: 'Mr George Taylor has been appointed director of corporate relations of COMPAIR'.

COMPANY NOTICES advertisement: 'PK CHRISTIANA BANK (UK) has appointed deputy managing director'.

COMPANY NOTICES advertisement: 'PANNELL KERR FORSTER has appointed five partners'.

COMPANY NOTICES advertisement: 'Mr Alexander Bennigsen has been appointed associate director'.

COMPANY NOTICES advertisement: 'Mr Derek V. Hoopes, managing director of Bell and Howell'.

CONTRACTS & TENDERS advertisement: 'PUBLIC ESTABLISHMENT OF ELECTRICITY CALL FOR OFFERS No. 1540'.

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CONTRACTS & TENDERS advertisement: 'PUBLIC ESTABLISHMENT OF ELECTRICITY CALL FOR OFFERS No. 1540'.

Residential Property advertisement: 'FREEHOLD FOR SALE BY AUCTION WARREN HOUSE (Formerly Springbank House)'.

SWITZERLAND advertisement: 'ATTENTION FOREIGNERS ON MAY 20TH it will be decided by REFERENDUM whether or not FOREIGNERS may acquire by purchase plots and chalets in Switzerland'.

TOX & SONS advertisement: 'SOUTH DEVON, BRIGHAM A prime residential development'.

FLAT FOR SALE advertisement: 'CITY EC4 Prestige modern block'.

AMERICAN EXECUTIVES advertisement: 'Seeking Executive Qualified for House up to \$500 per week'.

MONTREUX advertisement: '18 top quality flats for sale to foreigners'.

Legal Notices advertisement: 'PHILIP OSWALD ORDWAY'S SHAREHOLDING IN LEADING LEISURE PLC'.

SYRIAN ARAB REPUBLIC advertisement: 'Public Establishment of Electricity Financial Directorate - Extern contract section'.



TECHNOLOGY

EDITED BY ALAN CANE

FRENCH JOINT VENTURE COMPANY IS A SUCCESS FOR RENAULT AND BENDIX

Renix targets for car electronics

BY PAUL BETTS IN PARIS

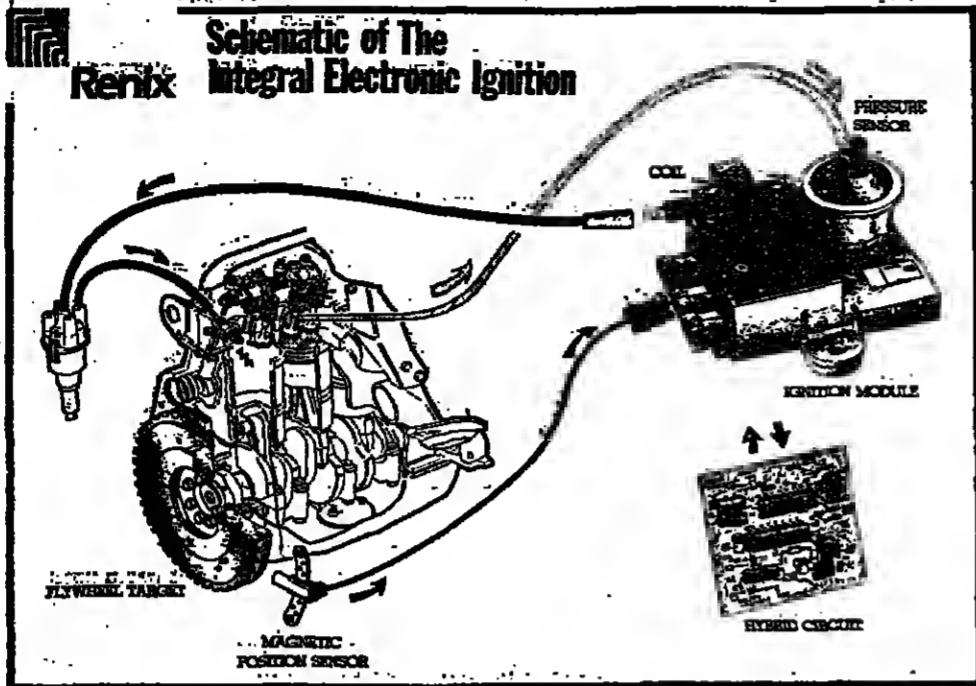
THE CAR of the future will have three microcomputers. One will control all engine propulsion; another will control all the functions involving the chassis from adjusting the suspension to providing an anti-skid system; and the third will control the car interior from dash board instruments to air-conditioning and the car radio.

M. Richard Tillie, the chief executive of Renix since the joint car electronics venture between the French state Renault car group and Bendix of the U.S. was set up nearly five years ago, says that such a computerised car will probably be on the road in five years' time. "We are already working on the first of the three computers involving the control of engine propulsion. We expect it to be ready in two years' time."

The microprocessors—contained in a six black boxes—will control electronically fuel injection, ignition, the automatic transmission, the car's cruise control system, as well as providing engine diagnostic and maintenance support. Renix, in collaboration with the scientific and technical division of Renault, which owns 51 per cent of the joint venture with Bendix, is also working on developing an electronic voice control system, enabling a driver to make a number of ordinary operations by voice alone. Renault has already assembled an experimental computer voice-operated system on a Renault 9 in its lab at Epiais-Malmaison in the Paris suburbs. The driver simply has to ask the car's computer to turn the blinkers on or find a station on the radio and the computer will obey.

A car responding to voice already solves one of the problems in use of cost of marketing and of reaching 100 per cent reliability. "You will never be able to drive a car by voice alone, but some aspects of voice command could be very useful." The ability to turn a car radio on and select a specific station by voice alone could prove to be a significant safety asset. A recent survey of accidents on the Paris "boulevards" (the great circular road around the city) shows that more than 50 per cent of all accidents are caused by drivers not watching the road while they tune their car radio.

But if Renix is working on the leading edge of car electro-



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Renix strategy to build up its expertise in other new car technologies. Barely a month ago it announced an agreement to set up for the first time a joint venture with a Japanese electronics company called Stanley to collaborate in liquid crystal technology for dashboard instruments. The plan is to construct a plant in France, produce liquid crystal dashboard instruments for Renault, and subsequently market at least 50 per cent of production to other companies. Renault is also about to reach a similar collaboration agreement with a U.S. company in the application of high performing ceramics for car engines.

In its five short years of existence, Renix is turning into one of the big successes of France's often arduous attempts to create a modern indigenous electronics industry on the model of Silicon Valley. The fact that in the huge Renault car group Renix, from the start, had a major captive market has significantly helped. Without such a captive market the venture would probably never have got started. Indeed, the venture has caused some acrimony in the European car supplier market

with Renault being accused by some component manufacturers of raiding their market.

In five years, Renix has invested about FFR 150m, has seen its sales grow from FFR 70m in 1981 to FFR 335m last year and expects to see them reach between FFR 400-410m this year. It started making a slender profit in 1982 with earnings of FFR 2.5m increasing to earnings of FFR 21.4m last year. "If our American partners had some apprehensions at first, this performance has more than reassured them," says M Tillie on what so far has been a harmonious partnership.

Renix has provided a marriage of convenience for both Renault and Bendix. The U.S. company, now controlled by Allied, the U.S. chemicals and oil conglomerate, has been gradually moving out of the car electronics business as the Detroit car makers have developed their own in-house electronics divisions. But through Renix, Bendix retains a foot in the engine electronics business while it retains a presence in brakes and anti-skid systems through its French DBA subsidiary, For Renault, Bendix

provided the know-how to enable the French group to build up a large scale presence in the car electronics business.

Renault now accounts for about 70 per cent of Renix production, with 20 per cent going to American Motors Corporation (AMC), the U.S. car maker 44.8 per cent owned by the French state company. The remaining 10 per cent of Renix production goes to Volvo which buys electronic ignition systems from the French company. By 1987, Renix hopes to sell 50 per cent of its production outside Renault with the other 50 per cent going to AMC and other car makers. M Tillie said talks were taking place between Renix with Peugeot, Fiat and Seat and were due to start soon with Saab. Volkswagen will soon become a Renix client. Renix has been chosen to develop the electronic transmission control for a joint VW-Renault automatic gearbox to be made at a rate of 2,200 units a day. "Production of this new gearbox is due to start at the end of next year," says M Tillie.

Renix employed just over 200 people in 1980, employed 578 people last year and expects to see its workforce grow to more than 1,000 people in coming months.

Renix opened its first workshop for the assembly of small sensors last October and has just opened a second workshop in the Toulouse area for the assembly of pressure sensors. It is due to open a second larger manufacturing facility at Foix, south of Toulouse this year to complement its Toulouse plant. It is also planning to open an engineering and research centre near Toulouse and has already set up this year a technical and commercial support facility in the U.S. largely to offer services to AMC but eventually to other groups in the U.S.

The current top management of Renix all stems from Renault. "If we started with Bendix know-how at the beginning, we now develop our system entirely on our own," says M Tillie. But while Renault is clearly now the dominant force in the joint venture, M Tillie claims Bendix is not just a sleeping partner. "Our board... consists of eight members... with four from Renault and four from Bendix. A majority of six votes is needed on board decisions. I don't think you can call that a sleeping partnership."

Graphics

Computer helps design stage sets

BY PETER MARSH

FUTURE SOAP operas on BBC television may feature stage sets designed with the help of computers. The corporation's computer graphics workshop is assisting how the people who plan production sets could benefit from computer-aided design techniques.

A computer could help, for example, planners who need a specific kind of door or window for a play that takes place mainly in a house's living room. With the hardware, the designer would call up from a database details about the items. For instance, he would discover if the artefacts are available from the BBC's central store.

The computerised technique would also help planners to work out the best ways of assembling sets from modular units such as standard panels for floors or walls.

Mr Bill Gardner, manager of the computer graphics workshop, says that the one-year study will see if it is possible to transfer to scenic design techniques employed in the system building of houses or flats.

The project is the most recent assignment for the workshop, which was set up four years ago and has a staff of 10. A key activity is the production of computer graphics to help in the reporting of elections.

In the few months before last year's general election, staff worked furiously to compile a package of graphics with which TV commentators could display and interpret results using 150 different animation sequences.

Mr Gardner's team is planning a similar, though more modest, effort to aid the interpretation of next month's elections to the European parliament. The workshop offers its services to programme makers anywhere in the BBC—apart from the people who produce news reports who have generally produced their own graphics.

Mr Gardner says that demand for the workshop's time is increasing. In the past year, some 200 BBC programmes which are handed out to people throughout the BBC who are responsible for broadcasts

example, is a regular user of computer animation.

The workshop's main tools are three "computerised paintboxes" made by Quantel, a British company that specialises in digital hardware for television. The paintboxes are part of £500,000 worth of computer equipment in the workshop.

The Quantel hardware features in the production of a three-dimensional sequence that is to form part of the opening sequence drawn out on paper. The computerised technique would also help planners to work out the best ways of assembling sets from modular units such as standard panels for floors or walls.

With specific commands, workers can assign to parts of the drawing particular colours. They can also arrange for objects in the picture to move in a set way.

The workshop has recently purchased software from CIS, a computer company in Cambridge, which will help in the preparation of new three-dimensional images.

Another series of products from Mr Gardner's department makes it appear that he is running a menagerie.

The ANT, EAGLE, OWL and DOG are not animals but acronyms for a set of supporting software used routinely in a variety of TV programmes. For example, ANT stands for animated news title—it is a piece of typography that sometimes appears on viewers' screens during news programmes. DOG is "digitally oriented graphics" that comes into play when "action replays" are broadcast, for example during soccer matches.

Another set of software encapsulates the commands onto TV screens the message: "Do not adjust your set."

These computer commands are inserted into "black boxes"—small computer systems—which are handed out to people throughout the BBC who are responsible for broadcasts

POWER BROKERS TO THE WORLD. The leading international supplier of generating sets from 3 to 300 kVA. POWER PLANT. For HAVEN'S POWER HOUSE PLANT LTD. 10, Brompton Road, London W14 9JF. Tel: 01-834 8515. Telex: 33558. Cable: Genet, Great.

Astronomy Moving telescope

ENGINEERS HAVE finished the task of transferring a telescope for astronomy from Copenhagen to the Canary Islands.

The Carlsberg Automatic Transit Circle, built in the 1950s by Grubb Parsons of Newcastle-upon-Tyne for the Copenhagen University Observatory, was removed to the island of La Palma because of the better observation conditions on this mountain site.

The telescope is now fully operational and has recorded the positions of 700 stars in a single night.

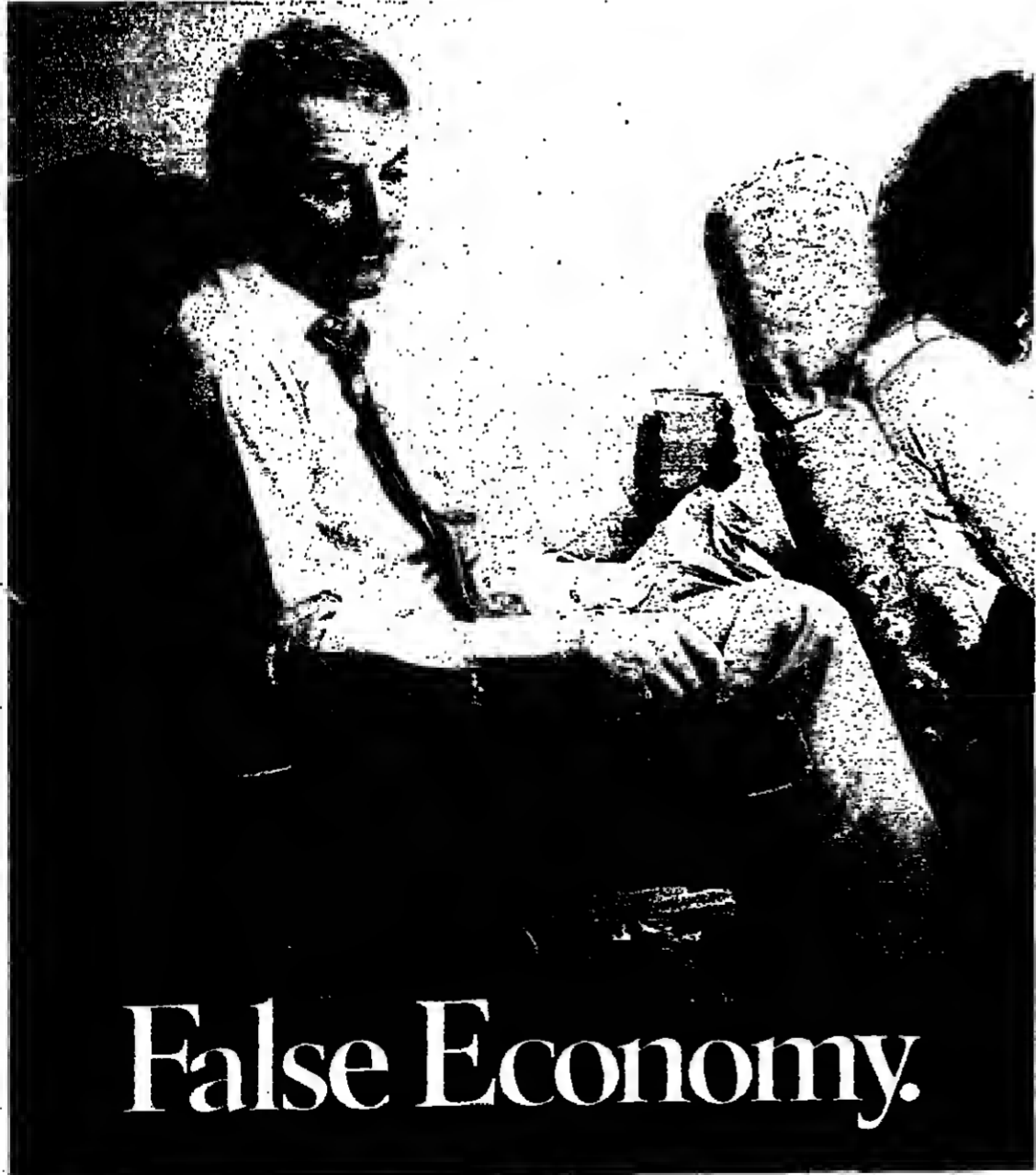
The instrument is part of a new international observatory on La Palma administered by the Instituto y Observatorio de Marina in San Fernando, Britain's Royal Greenwich Observatory, and the Copenhagen University Observatory.

Robotics Rubber 'muscles'

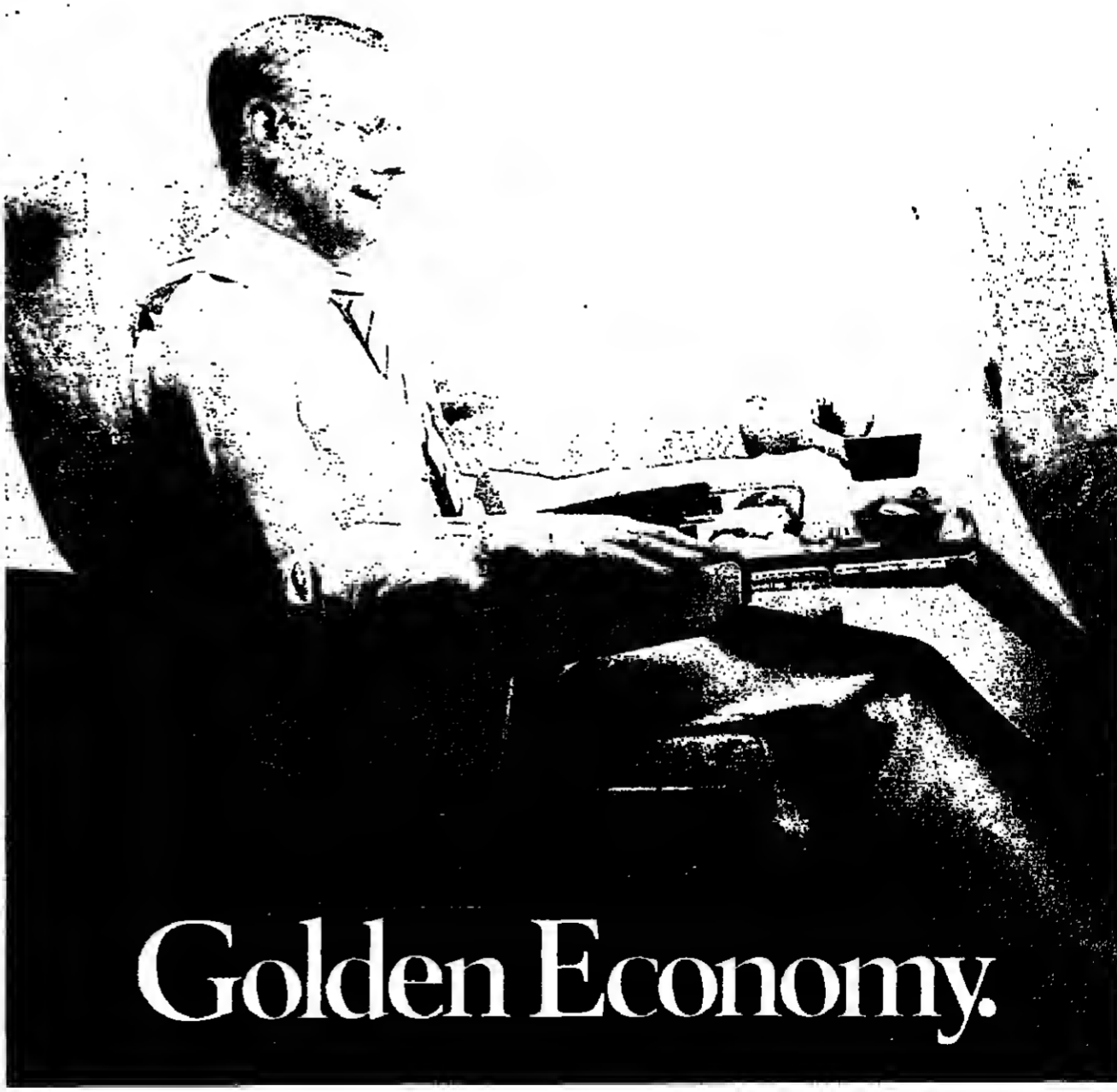
A ROBOT which uses rubber "muscles" and "hands" is said by its inventors to be more flexible than conventional machines for assembly line work.

Hitachi and Bridgetown Corporation's robot arm is controlled by compressed air. It can move into seven positions with the help of wire rope and pulleys, and can handle objects up to 6 kg in weight.

Production of the arm, which Hitachi says is lighter and smaller than existing robot manipulators, is due to begin shortly.



False Economy.



Golden Economy.

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THE ARTS

Television/Christopher Dunkley

Snooker has me in its pocket

I confess: like my mother before me, I am an addict. With millions of others all over Britain I find myself hooked. Melvyn Bragg's *South Bank Show* interview with Evan Hunter languishes on videotape, unwatched. Having resolved to review John Mortimer's play *Edwin* I snookered away for a drop of the hard stuff after only 40 elegant minutes with Guinness (well, honestly, it did feel like 90) and somehow never got back to the play.



Steve Davis potting for the championship

I had fully intended to watch the first of Desmond Wilton's three documentaries about the Jews of the U.S.A. in *The Golden Land*, believing despite the anti-Wilcox campaign that he is still one of our most level-headed and interesting television reporters, but I managed only five minutes before my hand reached out...

In a sober moment I did see the first of Basil Davidson's *Africa* series on Channel 4, which in the admirable habit of that channel, was not only interesting but passionate in its convictions. It was so desperately anxious to change what it assumed was my mind about black Africans, however, that in the end it did just the opposite. Anyone protesting this much must surely be suspect. If the similarity between the positions adopted by today's Nubian wretches and those depicted by ancient Egyptians is really the strongest sort of evidence to show that black Africa influenced Egyptian civilisation (which some of us had never realised was in contention) then the case seems a pretty shaky one. After all, every pair of wretches, east or west, ancient or modern, looks pretty much the same.

What is it that makes BBC's *World Snooker* quite so habit forming? As with most compulsive indulgences there is no single simple answer, all sorts of factors contribute, but perhaps the most important is the sheer length. The brief weekly ration of snooker dishes by Pot Black holds very few attractions for me, and yet the annual springtime marathon seems irresistible.

Could it be something to do with what the police and psychologists dealing with kidnap sieges call "The Swedish Syndrome"? This describes the way in which captives cooped up for long periods with their captors invariably come to sympathise and even identify with them. The same phenomenon surely operates between soap operas and viewers: even if reason dictates that you should dislike these shallow characters and do nothing to cooperate with them, the human attachment to the familiar holds the viewer in thrall and strengthens the relationship.

colour was introduced, so the story goes, one BBC producer was convinced there must be something which could now be done which had been impossible before, and after a week of racking his brains he woke in the night, punched his wife in the back and shouted "Snooker!" He could hardly have realised at that stage that he was not only right but that snooker would give viewers a unique advantage over the players by allowing them to see the possibilities sooner and clearer than anyone standing beside the table.

Shadowplay/Covent Garden

Clement Crisp



Merle Park and Wayne Eagling

The return of *Shadowplay* as centre-piece of a new triple bill brings back to the repertoire the finest of Antony Tudor's late ballets. When it was created for the Royal Ballet 17 years ago it seemed somewhat arcane; in this revival there are few uncertainties in its depiction of the Boy's journey to enlightenment through acceptance of his own animal nature and his "education" at the hands of a dominating male and a no less aggressive female.

The present cast was to have been led by Anthony Dowell, for whom the ballet was created. He is still suffering from an injury, and Wayne Eagling assumed the Boy's role, which he has danced excellently in the past, but to which he now brings greater expressive authority and a magnificent expansiveness in dance. Two other principals—Merle Park as the Celestial, Derek Rencher as the Terrestrial—were as potent as ever in their created roles. With them, and with Mr Eagling, the crisis of the ballet—Miss Park as destructive goddess head high; the Boy leaping beneath the arch of her legs down a colonnade of her minions to meet the challenge of the Terrestrial—was thrilling.

*Shadowplay* is a work infrequently given (this was only its 36th performance at Covent Garden), and one which benefits from the special nature implicit in this rarity of performance. Michael Annals' design remains ideal, and is admirably lit; the pertinence and merits of the Koechlin score were well argued by the Opera House orchestra under Barry Wordsworth.

Real Estate/Tricycle, Kilburn

Michael Coveney

After a quick burst of the *Silence* in a concert, things go rapidly down hill in this sleepy new play from Louise Page. By all accounts her *Solomon* at the Royal Court two years ago was a touching, imaginative beach-play with ghosts of the past peering with the sadness of the present. As in that play *Real Estate* messes together four characters. In this case also the ghosts of the future unborn and of the past buried loom large.

Jenny, a buyer of china who dresses in a concert, returns to visit her mother after 20 years. She is pregnant and wants to make contact. The mother, Gwen, suspects Jenny of merely wanting to take advantage of her. Gwen is a successful estate agent whose second husband, Dick, has taken early retirement. The father of Jenny's child is a divorced accountant, Eric, whose daughter Lotte threatens (from offstage) the

stability of his relationship with Jenny. Jenny has apparently returned to ward off a rubella scare by establishing that she has indeed had German measles. This innocent tactic is then overtaken by complications: Gwen and Dick lost their child as a result, Dick believes, of Jenny leaving home. "When Jenny went her womb let go," Jenny re-discovers her mother and moves in on the real estate business in order to get close to her.

Chekhov's Three Sisters

Ronald Holloway

Everything that's been written about Peter Stein's production of Anton Chekhov's *Drei Schwestern* (Three Sisters) at the Schaubühne am Lehniner Platz in West Berlin can be confirmed. This is, indeed, a milestone in contemporary West German theatre.

Perhaps the reason why Stein succeeds so magnificently is because *Sisters* is left clearly in the distance. Thoughts, after all, make for better drama than yearnings. So, when Irina talks of finally pulling up stakes and leaving, her reactions in the presence of her older sisters show that she never could.

When Olga laments that no one has ever asked for her hand as the oldest, one only has to look out of a corner of an eye at Masha to note what a mistake it is to accept on impulse. If that's not enough, there's the humiliating sight of the hope of the family, Andrei, docilely pushing a pram through the garden.

Candy Kisses/Bush

Michael Coveney

As usual, John Byrne's own design for his riotously inventive, occasionally hilarious new play at the Bush is an indispensable extension of the text itself. We are in a Florentine pensione in 1968, the night when John Sessions and John Sessions, a German picture restorer, works on a recently discovered fresco. The action, conducted mostly *à fresco*, is bounded by a shrine to the Virgin Mary on the balcony, a neatly placed upper window, a hallway and a distant view of the city. Again, as usual, you marvel at how so much is achieved in so little space.

It is one of the neat tricks of the piece that the movement of the eccumenical Pope with his cold-fish successor is, eventually, tied in with the death of President Kennedy, and the Italian's sense of loss paralleled with the shattering blow to the American morale by the news from Dallas. This reaction of a nation is embodied in the endlessly confessional outbursts of the draft-dodger and, as you would expect, recycled as a comic weapon.

The proceedings are loosely supervised by the black-haired Irish landlady of Peggy Marshall. Quite apart from ensuring that some splendidly farcical situations, Mr Byrne has great fun exploiting the language barriers between a stage full of people all ostensibly speaking English. Robin Lefevre directs with some aplomb and much glee, as well he might. However, one or two dialogues need drastic cutting. But *Candy Kisses* is a sure sign that John

Byrne is strengthening and deepening his stage art, without losing any of that affectionate wryness about the past he has lived which is the motor — and mother — of his invention.



Carmen du Sautoy and John Sessions

Makarova in 'On Your Toes' at the Palace

Natalia Makarova will star in the Rodgers and Hart musical *On Your Toes* which will open at the Palace Theatre on Tuesday June 12 with previews from May 31. She will repeat her Tony Award winning performance as Vera Baronova in the show, which also won the 1983 Tony Award as Best Revival.

Ninety-six-year-old George Abbott, who co-wrote *On Your Toes* and who directed the original production, will come to London to oversee this production.

Arts Guide

Music/Monday, Opera and Ballet/Tuesday, Theatre/Wednesday, Exhibitions/Thursday, A selective guide to all the Arts appears each Friday. May 4-10

Theatre

**LONDON**  
**Lost (Ambassadors):** Leonard Rossiter is a wonderful T. S. Eliot in Jonathan Lynn's enjoyable farce of Joe Orton's farce in which a leading role is played by a mummified corpse. The versatile Gemma Craven plays the Irish nurse who is open to offers and party to crime. (881117).

**The Aspen Papers (Haymarket):** Vanessa Redgrave and Wendy Hiller give superb performances in Michael Redgrave's 1958 version of Henry James's story. The inquisitive scholar who descends on their Venetian palazzo is played, paradoxically, by Christopher Reeve. (830432).

**A Streetcar Named Desire (Perennial):** Sheila Gish gives the performance of her life as Blanche Dubois in Al-an Strachan's excellent revival, first seen last year. 45 Grosvenor. Tennessee Williams's emotional recollector of a play assumes one of the best of the award-winning in town. (838123).

**Little Shop of Horrors (Comedy):** Campy off-Broadway import which is less good than *The Rocky Horror Picture Show*, but which has a curious charm, a full-blown performance from Ellen Greene and an occasionally expanding man-eating prickly plant. (830257).

**Pack of Lies (Lyric):** Judi Dench in a decent, entrancing play about the breaking of a spy ring in the suburban Ruslip of 1938-60. Hugh Whitham's script cleverly constructs a drama about betrayal from the

friendship of neighbours. The story is based on fact and well directed by Clifford Williams. (437386).

**The Real Thing (Strand):** Susan Pennington and Paul Shelley now take the leads in Tom Stoppard's fascinating, complex, slightly flawed new play. Peter Wood's production strikes a happy note of serious levity. (838266/4142).

**Daisy Pulls It Off (Globe):** Enjoyable romp derives from the world of Angela Brazil novels: gym slips, hockey sticks, a cliff-top rescue, stout moral conclusion and a rousing school hymn. Spiffing if you're in that sort of mood. (437188).

Chicago

**E. B. (Forum):** Moving into its second year parodying melodrama in a hospital setting, this emergency room continues its adventures among a young doctor, a receptionist and an authoritarian nurse. (4863000).

New York

**Cats (Winter Garden):** Still a sellout, Trevor Nunn's production of T. S. Eliot children's poetry set to trendy music is visually striking and choreographically fine, but classic only in the sense of a rather staid

Brussels

**The School For Scandal** by Sheridan, directed by John Barton and starring Donald Sinden, Dulcie Gray and Gopple Wilton, is presented by the British Council at Passage 44.

Tokyo

**Cats (Cats Theatre):** The specially built tent theatre, excellent set, good dancing and Kabuki-origami movement all make the Japanese version worth seeing. Shiki Asari, directed by Katia Asari. (821010).



# FINANCIAL TIMES

BRACKEN HOUSE, CANNON STREET, LONDON EC4A 4BY  
Telegrams: Finatimo, London PS4, Telex: 6954871  
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Wednesday May 9 1984

## Shadow of the U.S. deficit

ALTHOUGH the money supply estimate published yesterday was good enough to take some pressure off money market rates and so hold off a decision on clearing bank base rates for a few days more, the odds still seem to favour a rise before the week is out. Spv a rise combined with reviving militancy spreading from the coalfields to British Leyland, will be something of a blow to business confidence. If the financial and labour news remains unchanged, it could be a direct blow to economic activity as well. Are the financial markets responding rationally to the signs of potential rise in inflation at home—as is also suggested by the recent increase in producer prices—or are we suffering from an imported American virus?

The pessimistic view of the UK economy certainly cannot be dismissed out of hand. The trend of private sector wage settlements has for some time suggested that the recovery in demand might work through to prices, and this is now happening. It is still an open question whether this is the beginning of some self-generating spiral, or simply a once-for-all recovery in margins previously depressed by the recession, but there are at least grounds for caution.

Equally, it is far too early to conclude that the signs of a recovery are permanent. The dispute at Longbridge is the start of a new trend; the desperate drive for efficiency there has built up special local resentment. On the whole, pay settlements have been remarkably stable against a background of sharply recovering profits, though at all times rather too high for comfort.

**Realisation**

The markets have also been inclined to read warnings in the revival of house prices. Here again, though, there are some special factors at work. Apart from the sluggish responses of the building societies to falling interest rates elsewhere—which could now prove a wise realisation that the fall might be temporary—the societies have a special motive for raising their mortgage lending. The decision shortly before the Budget to tax their dealing profits has persuaded them to seek to shorten their portfolios and lead the proceeds.

The jury is still out, then, on the real economy. It would certainly be very depressing to

## Mr Botha's visit

AT FIRST GLANCE it is hard to see what Mrs Thatcher thinks she will gain by inviting Mr P. W. Botha, the South African Prime Minister to visit her in London next month. She can reasonably argue that to meet a government leader is not to condone his policies—and she has already invoked the example of contact with the Soviet leadership to reinforce this point. Her problem is that perceptions may simply refuse to conform to this reality.

Mr Botha's visit will be the first by a South African premier since Dr Hendrik Verwoerd, the chief architect of apartheid, came to the UK in 1962 to seek support against the campaign to expel his country from the Commonwealth. It will thus be charged with a symbolic importance that will defy logic.

In the UK, it will be the prelude to further protest and demonstration against the policies of the Conservative Government. Coming on top of the insignificant, but highly visible decision to grant UK citizenship to a young South African aborigine, Zola Budd, it will be pounced upon in the Third World as evidence that Mrs Thatcher is soft on apartheid. In South Africa itself Mr Botha's ability to arrange a European tour will be regarded as proof that his Government's changes in the South African constitution and rapprochement with neighbouring black Africa states are rehabilitating South Africa in the eyes of other Western countries.

**Question**

The gains which will make such misconceptions worth enduring are less obvious than usual. South Africa needs no outside encouragement to remain steadfast in its opposition to Soviet expansionism. There is already adequate contact at ministerial level between the UK and South Africa to avoid any misunderstandings between the two governments. Trade and investment links between the UK and South Africa do not need any bolstering.

Yet Mrs Thatcher's Government found itself posed not with the question "why?" but with the question "why not?" It appears that Chancellor Helmut Kohl of West Germany, who faces a more deeply committed pro-South Africa indus-

trial and political lobby than does Mrs Thatcher, had already decided to receive Mr Botha on his European tour. Visits to Portugal and Switzerland were scheduled to precede these circumstances it would have been counter-productive for Mrs Thatcher to have gone it alone in preserving the top level ostracism of the past 20 years.

**At odds**

It would also have been too visibly at odds with the policy of so-called "constructive engagement" espoused by the present U.S. Administration. This amounts to a carrot-rather-than-stick approach in seeking changes both in apartheid and in South Africa's relations with its neighbouring African states.

It is hard to argue that this approach has been sterile, for it has coincided with important changes in both areas. The referendum approving constitutional change in South Africa confirmed a more liberal tinge in the white South African political consensus. There has been a non-aggression pact between the South African President Samora Michel of Mozambique. There are also hopeful signs of moves towards a peaceful settlement in Namibia, with talks arranged between the South West African People's Organisation (Swapo), the principal nationalist movement, and South African officials.

Mrs Thatcher will now have to make clear her attitudes to these developments with words in place of aloofness. She will have to criticise a constitutional reform which, while giving coloured and Asian South Africans the vote, also reaffirms that Black South Africans, the overwhelming majority, remain constitutionally excluded from the democratic process.

She will have to urge Mr Botha to follow the precedent in relations with neighbouring states by giving Namibia its long-promised independence. She will have to convey to a premier who has been able to travel only seldom that these are the attitudes of a Conservative government firmly opposed to socialism as he is. She will have to do all this publicly, as well as privately, so that no one is left in any doubt as to what her government's attitude to South Africa really is.

**MRS THATCHER** has about six weeks to decide whether she wishes to have a European policy.

At the moment, she appears to feel no such need; her ideas on the subject of Europe seem limited to the important yet essentially secondary notion of struggling against those entrenched practices of the European Community which are either undesirable in themselves or at variance with British interests.

On the Continent, by contrast, a much larger debate is stirring on the political future of Europe. Of this, there is as yet no sympathetic echo from London; not for the first time, Britain seems either unaware, or sceptical, of aspirations which are setting up powerful vibrations across the Channel. Whereas Professor Walter Hallstein, first Commission President, used to say: "Our business is politics," Mrs Thatcher seems to imply that her politics is business.

In one sense, there is no immediate hurry. It is customary to deplore the apparently childish obstinacy with which Britain and the Nine are banking at the final compromise on the mechanisms to limit Britain's excess contribution to the Community budget. Everybody knows that the negotiating gap left by the Brussels summit seven weeks ago was extremely narrow; certainly not wide enough to call in question the inevitability of an eventual agreement on the final chapter of the most important package of reforms in the Community's history.

So why not get it over and done with, and move on to the more important issues of the future, starting, but not ending, with the structural problems of the European economy? There is after all no objective reason why a deal could not be done today, or tomorrow.

Who knows, perhaps it will be done today, or at the next time Mrs Thatcher meets President Mitterrand. But with the passage of time it begins to look as though there is a tacit understanding not to make the final deal, or at least not to reveal it, until next month's European summit at Fontainebleau. The case for such delay is that the elections to the European Parliament take place ten days before the summit.

All ten governments can expect, in varying degrees, a backlash from rural voters, as a result of these first steps in curbing the wastefulness of the agricultural policy which have already been agreed and announced; none will now wish to expose itself to accusations of having made a further sacrifice of national interests.

In France, moreover, the European elections are being seen as a virtual referendum on the general standing of the socialist government. Neither President Mitterrand, nor any of the other eight, will wish to be charged with having made the final capitulation to the narrow but inescapable demands of the iron fist of the Gaullists.

Similar considerations apply to the debate on the political future of Europe. The French and the German governments are both determined to place this larger issue on the agenda, as soon as the final farm-policy reforms are wrapped up, and they are working together to co-ordinate their views on how it should be formulated and presented to the other eight member states.

As of now their ideas are still not finalised; but in any case the German Government, at least, does not want the highly-charged issue of Europe's political future to become a campaign football before the first serious discussions. This may seem perverse and undemocratic. After all, if direct elections to the European Parliament have any meaning, they should be particularly relevant to the political future of Europe. The trouble is that the Germans do not yet have hard and fast proposals; they are uncertain of the likely reaction of the other member states; and some of the issues bound to be the core of any radical evolution in western Europe. But it is no substitute for a wider consensus on Europe's political arrangements, and despite the genuine determination of both governments to strengthen their mutual links, the structural geo-strategic tensions within the Franco-German relationship would be much easier to resolve—perhaps can only be resolved—in a large grouping.

These geo-strategic tensions derive from France's longstanding claim to a privileged place in the European constellation, free from the political commitments and operational obligations of the other members of the Atlantic Alliance.

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Time has passed. De Gaulle has been succeeded by a socialist President; the credibility of the American nuclear guarantee has been questioned, by Europeans and Americans alike, as a consequence of Soviet establishment of nuclear parity with the U.S.; the French who are now pressing for closer defence co-operation in Europe are apparently shattered the defence-policy consensus in Germany; and it is the French who are now pressing for closer defence co-operation in Europe.

The paradox is that the meeting of the Gaullist ice-jam has released long pent-up resentments in West Germany against its closest European partner. In the 1950s and 1960s,

for reasons of war-guilt and for the sake of political rehabilitation, the Germans were prepared to swallow their anger at France's reckless pride in playing fast and loose with Atlantic solidarity; and in those days, they had no doubt that Washington was a more reliable ally than Paris, and a more effective guarantor of German security.

But now that Washington's reliability is beginning to be called in question, and now that France is showing unaccustomed anxiety over the volatility of German political opinion, the Germans are beginning to feel free to say those things about the Gaullist legacy which for so long they have bitten back.

Under President Mitterrand, France has already moved an immense distance away from the unadmitted egocentricity of Gaullism.

The 1963 Franco-German friendship treaty, originally designed to stifle German objections to the Gaullist veto on British membership of the European Community, has been given new life with the activation, 20 years later, of the provision for joint consultation on defence questions.

It is France which is pressing for the revitalisation of the Western European Union defence treaty, which links Britain and the six founding members of the European Community. And the new French plan for a five-division Force d'Action Rapide is clearly intended to make it possible for France to participate with the other Nato countries in the forward defence of Germany—if the President on the day so decides. (Under existing arrangements, the first French

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likely to be raised by the Germans are highly controversial, not to say explosive.

Of the Ten, at least three—Denmark, Greece and Ireland—could well prove recalcitrant at any attempt to strengthen the political dimension of the European Community. The German Government asserts that it will not accept that the Community's progress should be restricted to the speed of the slowest vessel; there can be no veto by anti-federalists, fellow travellers and neutrals. If progress can only be made on the basis of Franco-German cooperation, at least at first, then so be it.

On the other hand, this is obviously not an optimum solution. Many people believe, and the French for questionable motives have often asserted, that the Franco-German axis is

**Leslie on the Barclays bridge**

There is no question who comes out best from the bewildering string of appointments announced by Barclays Bank. Peter Leslie, the urbane international banker, has won the key new job of chief general manager of the soon-to-be merged foreign and domestic bits of the bank.

He will be "the man who drives the ship" in the elaborate power structure created by Sir Timothy Bevan, the chairman. However, Sir Timothy will continue to be the chief executive officer and, as such, will be the only clearing bank chief to combine those roles.

Leslie was keeping a low profile yesterday, so low that he wasn't even taking calls, apparently to avoid undiplomatic utterances at the finish of one of the City's most closely watched horse races. But a colleague described him as "a very efficient bloke."

He joined Barclays DCO in 1955 and spent many years in Africa before rising through the upper echelons in London and emerging at the top of Barclays

**Men and Matters**

Bank International in the 1970s. Then last year he became general manager for finance and planning, a job in which he not only had to manage £1.5 billion in assets but also to start a new £600m sheet but start at first, then to manage the merger, Parliamentary Bill and all.

To City Kremlinologists, though, the changes yield revealing clues to the future of the bank. With Sir Timothy due to retire in only three years' time, his successor must be among those promoted yesterday. At 53, Leslie could be chairman for four years before reaching Barclays' retiring age of 60.

**... and bank cover-up**

Short skirts and make-up were much in evidence yesterday among the 50, mostly British, female staff at the City of London office of Bank Mellie Iran.

The majority of those who felt liberated enough to talk to reporters said they were indignantly refusing to comply with their employer's edict to adopt the "modest attire" appropriate to the principles of Islam. "Every now and then they try to make the place more Islamic and it may be they are trying to ease women out altogether. They have tried in the past to get us to cover up our arms but we just ignored it," said Robyn Williams, a 29-year-old employee outside the Moorgate office.

The state-controlled Iranian bank wants its women to cover heads, arms and wear "minimal make-up." In response to callers, male managers yesterday kept their heads down and their lips sealed as the Banking, Insurance and Finance Union, created a storm of unwelcome publicity.

BIFU, which is not recog-

**Untrue blues**

Cambridge is still, apparently, a name with a cachet—in spite of the university's performances in recent boat races.

On the Melbourne science park, an industrial estate which, geographically speaking, marches with Royston, Hertfordshire, rather than Cambridge, Cambridgeshire, the number of competitive companies are increasing upon being allowed a Cambridge address.

That is in spite of Post Office preparations that they are bending latitude and longitude to suit their commercial ends. One company, Biotech Systems, runs a sales distribution service of high technology equipment. Colin Hilder, managing director, explains what is in a name: "Cambridge is a well-known city overseas and it has kudos. The name Cambridge has definitely helped us achieve an immediate rapport with overseas customers."

He adds, "One of the first

things we are asked is where we are from. And it seems to be taken as an indicator of whether we are viable or not."

Another company insisting upon a Cambridge address is EBM Advanced Technology, whose managing director, Ted McMillan, says, "Cambridge is recognisable anywhere in the world, and there are few other places in Britain that you could say that about."

When the Post Office surely the solution would be to give the customers what they want? "No," says the PO sternly. "Changing the post town from Royston to Cambridge would add to our expenses."

**McBurnie's market**

Only McBurnie, who leaves only Glass to take over as the director general of the Institute of Marketing, believes fervently in the force of marketing as the next step out of the recession.

McBurnie, 54, says he is worried by those companies who believe that after four years of cost cutting and streamlining their manufacturing operations, that they can now sit back and simply reap the benefits. "The market place is even more competitive now—both at home and abroad—and unless companies get their marketing strategy right, their sacrifices of the past few years will have been in vain."

McBurnie brings with him to the job an impressive track record in the marketing world. He held marketing jobs with ICI and Mullard before joining United Glass in 1965 where probably his biggest achievement was spearheading the dramatic growth of the Ravenhead Glass tableware operation. He takes over an institute whose fortunes have improved significantly under the 12-year stewardship of retiring director general, Peter Blood. McBurnie, however, believes that the time is now ripe to build on this sound organisation and preach the marketing gospel in a more practical way.

**Observer**

## FOREIGN AFFAIRS



Will Mrs Thatcher (left) follow the lead of President Mitterrand (centre) and Chancellor Kohl?

# Europe's political future: a new agenda takes shape

By Ian Davidson

As of now their ideas are still not finalised; but in any case the German Government, at least, does not want the highly-charged issue of Europe's political future to become a campaign football before the first serious discussions. This may seem perverse and undemocratic. After all, if direct elections to the European Parliament have any meaning, they should be particularly relevant to the political future of Europe. The trouble is that the Germans do not yet have hard and fast proposals; they are uncertain of the likely reaction of the other member states; and some of the issues

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likely to be raised by the Germans are highly controversial, not to say explosive.

Of the Ten, at least three—Denmark, Greece and Ireland—could well prove recalcitrant at any attempt to strengthen the political dimension of the European Community. The German Government asserts that it will not accept that the Community's progress should be restricted to the speed of the slowest vessel; there can be no veto by anti-federalists, fellow travellers and neutrals. If progress can only be made on the basis of Franco-German cooperation, at least at first, then so be it.

On the other hand, this is obviously not an optimum solution. Many people believe, and the French for questionable motives have often asserted, that the Franco-German axis is

bound to be the core of any radical evolution in western Europe. But it is no substitute for a wider consensus on Europe's political arrangements, and despite the genuine determination of both governments to strengthen their mutual links, the structural geo-strategic tensions within the Franco-German relationship would be much easier to resolve—perhaps can only be resolved—in a large grouping.

These geo-strategic tensions derive from France's longstanding claim to a privileged place in the European constellation, free from the political commitments and operational obligations of the other members of the Atlantic Alliance.

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Time has passed. De Gaulle has been succeeded by a socialist President; the credibility of the American nuclear guarantee has been questioned, by Europeans and Americans alike, as a consequence of Soviet establishment of nuclear parity with the U.S.; the French who are now pressing for closer defence co-operation in Europe are apparently shattered the defence-policy consensus in Germany; and it is the French who are now pressing for closer defence co-operation in Europe.

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But now that Washington's reliability is beginning to be called in question, and now that France is showing unaccustomed anxiety over the volatility of German political opinion, the Germans are beginning to feel free to say those things about the Gaullist legacy which for so long they have bitten back.

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It is France which is pressing for the revitalisation of the Western European Union defence treaty, which links Britain and the six founding members of the European Community. And the new French plan for a five-division Force d'Action Rapide is clearly intended to make it possible for France to participate with the other Nato countries in the forward defence of Germany—if the President on the day so decides. (Under existing arrangements, the first French

army astride the Rhine at Strasbourg, is, at best, a reserve for the rest of Nato, at worst the guarantee of the French sanctuary.)

No doubt the Germans are grateful for this evolution in French thinking, but they make it clear that they expect quite a lot more movement on the French side. Listen to the words of a pivotal official in the Bonn Government: "There is a pre-condition: closer security co-operation depends on closer political co-operation." Or again: "We want to avoid three strategies in Europe; the strategy of Nato, a strategy for Western European Union, and a strategy for France." Or

### Characteristic, but beside the point

again: "The nuclear powers have special responsibilities towards the non-nuclear powers; we cannot accept that France and Britain should stand pat on total sovereignty and national independence."

When decoded, the message is pretty tough. Top priority for the German Government is the maintenance of Nato solidarity. It is interested in strengthening the European pillar of the Alliance, but not at the expense of the broader alliance. It is not automatically persuaded that Western European Union is the right vehicle, but in any case France must be more deeply committed to the common defence than Gaullist doctrine, which remains the rhetoric of the French socialist government, has traditionally allowed.

The German Defence Ministry puts a rather more up-beat gloss on the progress already made in the Franco-German military consultations, though it is clear that there has been some pretty plain speaking.

"We are starting to exchange views," says a senior official, "on the French definition of their vital national interests. We ask them whether they regard West Germany as a military glacis to gain time, or as part of their vital national interests...."

"We have achieved a large measure of common thinking on these issues, and surprising progress towards clarity on the philosophy of nuclear strategy...."

"There is a considerable change in the mental attitude of the French. They now appreciate that in the event of a war in central Europe, the battle for Germany would also be the battle for France. There is no need for a grand renegotiation between France and Nato—perhaps some pragmatic adjustments...."

But in unofficial encounters, the tone can be much sharper. At a private European conference over the weekend, a German professor said: "The main question is, where are the French forces and French nuclear weapons? If they are on the wrong side of the Rhine, that is hard to explain. To German public opinion." A very distinguished Dutchman said: "With Germany as Europe's paymaster, and with France in its defence sanctuary, you have the death knell of Europe." At the end of the discussion, an eminent Frenchman long associated with defence issues remarked that he had never heard such brutal comments on French policy.

It sometimes seems as though the French Government's interest in European defence questions is primarily motivated by a desire to promote more collaboration in arms procurement; if so, the Franco-German relationship is not enough.

The two governments have reviewed a long list of possible weapons projects—and have concluded that the costs are too great unless they are shared by a larger number of countries, including Britain.

Yet it is clear that weapons procurement and military strategy are not independent issues in separate, water-tight boxes; any far-reaching European programme of arms procurement is bound to raise questions of strategy, questions which are in any case raised by the common desire to shift the balance of deterrence in the direction of more sophisticated conventional weapons.

British reservations about the desirability of resuscitating the somewhat antiquated institutions of Western European Union are absolutely characteristic, and absolutely beside the point.

The questions being raised explicitly by the Germans, and implicitly by the French, concern the most fundamental issues of Europe's political structure. There are no magic blue-prints; the agenda is wide, and wide-open; the choice of forum is at this stage irrelevant, except that it should include all those countries which ought to be interested in the questions. The debate now fermenting on the Continent will only be influenced by those governments which feel the need for a European policy.

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THE AEG REVIVAL

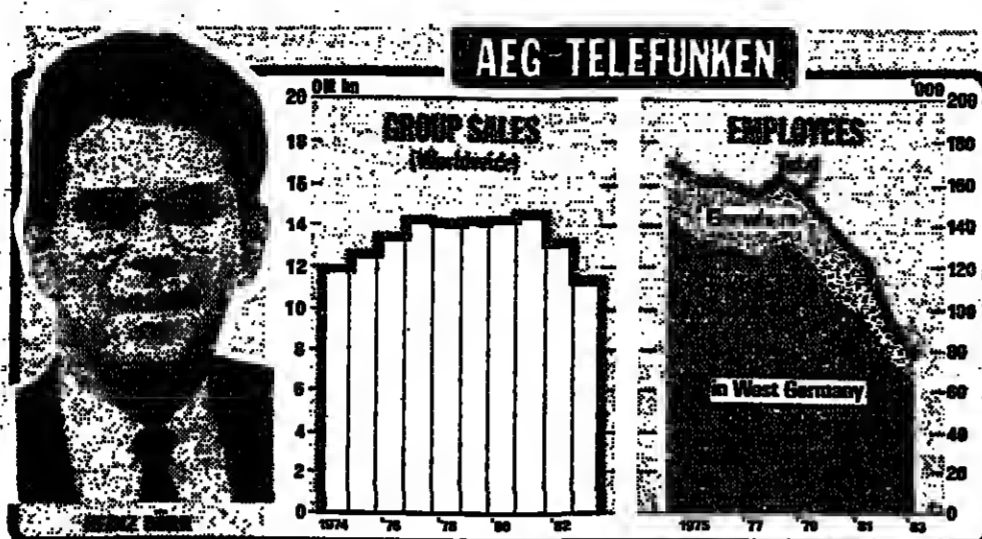
Learning to cope with success

By Jonathan Carr in Frankfurt

FOR MORE than four years, Herr Heinz Dürr has battled with the problems of AEG-Telefunken, the lumbering, deeply-indebted West German electrical group.

That Herr Dürr is aware of the problem was clear from his extraordinarily reticent comments at the press conference this week to present AEG's results for 1983. He noted almost in passing that the group worldwide had made a net profit of DM 37m—after an operating loss of DM 332m (€245m) in 1982—but stressed that this was "no reason to cheer."

The warning is certainly justified. For example, under the terms of the composition, AEG's creditor banks will be asked to provide the "Vergleich" (the start of 1983) and profitability still too low.



The danger is that this kind of warning will not make an impact on AEG's sorely-tried labour force. After all, for a very long time (perhaps longer than some of AEG's younger workers can remember) the company has produced poor, sometimes disastrous, results and has been the object of a lot of sour jokes.

His background as head of the Thomson building company, the only division of AEG still in the red is Office Systems (Olympia), which accounts for 10 per cent of sales compared with 20 per cent for automotive engineering, 16 per cent for standard products like cables, tubes and meters, and 15 per cent for radio, radar and communications systems.

It may seem exaggerated to praise Herr Dürr for this turnaround to profit. Many people, after all, would argue that "I would be sitting pretty too if 60 per cent of my debts were written off at a stroke."

it has long lacked—a sense of continuity and a boost to morale. Since the war, during which AEG lost the vast majority of its assets which were in the East, the company has got through 10 chief executives and academics alike. But—surprise, surprise—the literature is notably silent on what actually is meant by the term.

Not everyone believed that at first, thinking he might scuttle off back to his family business after the Vergleich was opened—or at least leave as soon as AEG was back in the black. Now those doubts have gone, following Herr Dürr's recent reappointment as chief executive for a further five years—that is to 1990.

Economic adjustment

Jargon phrase that hides the issues

By Tony Killick

THE NEED for economic adjustment in the face of balance of payments difficulties has become a common theme for statesmen, public servants and academics alike. But—surprise, surprise—the literature is notably silent on what actually is meant by the term.

Imports have indeed been cut, and not only in the major Latin American countries. Taking all oil importing (less developed) countries (less) together, their total import volumes expanded at over 8 per cent per annum in 1982-74 and at 4 1/2 per cent in 1974-79, but declined by nearly 1 per cent per annum in 1979-82.

To a major extent, import savings have been achieved by the intensification of trade and payments restrictions. The 1983 IMF report on exchange controls found that many ideas had tightened import restrictions, payments regulations and the regulation of "invisible" transactions. Even so, there had also been a worsening in payments arrears, which had doubled in a short period.

A good deal of it was the result of reductions in demand, investment and economic growth—bad news for the world economy once again. Thus, from an average of 5 per cent per annum in 1976-80, the average real growth of GDP fell to an estimated 1.4 per cent in 1980-83, well below the expansion of population, notwithstanding a much better performance in southern and eastern Asia.

duced real incomes; lost jobs; the aggravation of poverty. What policy-makers have to worry about is how to achieve cost-minimising adjustment, not least in the poverty-ridden countries of Africa, Asia and the Western Hemisphere.

The name of the cost-minimising game is structural adjustment. This means shifts in the composition of production and demand to increase export earnings and reduce import dependence. It implies a movement of resources into the sectors producing tradeable goods (notably agriculture and industry), at the relative expense of non-tradeables (especially consumer-oriented services). This is the kind of adjustment which the World Bank has been assisting in recent years, and it is one in which the exchange rate has a specially important role to play.

An interest rate

Smithsonian

From the Managing Director, Samuel Montagu & Co.

Sir,—Nicholas Colchester's Lombard (May 3) on interest rate subsidies for less developed countries' problem loans prompts the hope that the meeting of the leading central bankers in the United States this week will result in the only simple solution to the problem—namely, an "interest rate Smithsonian."

It is perfectly clear that if all leading countries reduced their interest rates by, say, one-third, there would on the next day be no change in the supply of money or in relative exchange rates.

In today's economic theory the immediate reaction is to say that this would be inflationary, but why? The cost of money is the price of a vital ingredient to business and government, and a significant reduction in its price should be disinflationary, and a major relief to LDCs.

Are we simply being slaves to the current economic nostrums in not adopting the simplest possible solution to the debt crisis? David R. W. Potter, 114, Old Broad Street, EC2.

Reforming the rates

From Mr H. Law

Sir,—A rate reform in favour of site value rating would also provide the opportunity to resolve the problem of the rate support grant. As with any spending that comes from central government funds, it has its origin in taxes which destroy incentives and distort consumption. This is why I propose that all local government spending should be financed from a site value rating system. In the initial stage, it would simply replace the present rating system, and would aim to raise roughly the same revenue. Evidence from the Whitstable land value surveys of 1955 and 1975 showed that the rates paid by commercial and domestic ratepayers would be slightly less than at present; this would occur because site value rating would widen the rate base to include vacant and agricultural land.

In the second stage of the scheme, the rate support grant would be replaced by a national equalisation scheme. The fund

Letters to the Editor

for this would be raised by a national and uniform rate precept, which would be redistributed to local authorities in exactly the same way as the present rate support grant or by any other formula to be decided by the government of the day. The net result would be to transfer resources from areas where land values were high to areas where they were low.

The transition from rate support grant to equalisation scheme could take place over several years. In this way, a tax on land values, with no harmful effect on the economy, could replace around £20m of damaging taxes. Thus, it would be possible to restore incentives without ruthless cuts in public spending. Henry Richards, 73 Parkfields Road, Hove, Sussex.

Free trade and agriculture

From Mr D. Richards

Sir,—I appreciate Mr Davie-Thornhill's reasons (May 2) for predicting a decrease in the farm area and an increase in its grain character if free trade were to be restored to agriculture.

He does not, however, take sufficient account of the lowering of input costs that would result. Feedingstuffs, particularly, would be much cheaper, and the rest of land would fall, and capital costs in general would become less significant—for no amount of cost-cutting can uphold the methods of "prairie" production made possible purely by public protection. Lower input-lower output farming would certainly result, but I believe that this implies more people actually working on the land (less in the supply industries) and a more beautiful countryside. David Richards, 73 Parkfields Road, Bridgend, Mid Glamorgan.

Words and figures can't agree

From the Chairman, Finance & General Purposes Committee, Greater London Council. Sir,—Conservative leaders in the Midlands and the north are

claiming that abolition of the metropolitan counties could save £20m, mainly through sackings. Tory leaders in London claim that abolition of Greater London Council would also save the capital's ratepayers millions of pounds.

Why is it then that the Government itself, the author and architect of the abolition plans, has singularly failed to come up with any figures to prove that abolition will save money? The only money figure which appears in the Government's abolition White Paper is on the front cover—the £2.60 price to buy it from Her Majesty's Stationery Office.

Although the metropolitan Tories' claim is based on a report they commissioned from well known financial consultants it is in direct conflict with an earlier report from equally eminent and independent consultants who predicted no savings but substantial increased costs.

It is high time the Government started producing its own figures to show ratepayers in both London and the metropolitan counties exactly how much it predicts rate bills are going to be reduced through abolition of the democratically elected councils. Or does the Government's silence say it all? In reality there will be no savings but massive increases in costs brought about by the chaos and confusion of the proposals. John McDonnell, County Hall, SE1.

Vehicle tax evasion

From the Chairman, Driver and Vehicle Licensing Centre, Trade Union Side

Sir,—I refer to Hazel Duffy's article of May 3. The Public Accounts Committee report urges the Department of Transport to ensure that no offence reports are abandoned purely through lack of staff. The DVLC trade unions have constantly urged ministers to increase staff numbers, particularly in the light of Sir Derek Rayner's scrutiny of vehicle excise duty enforcement.

We would wish to see a substantial increase in staff numbers, to the extent that the DVLC, Swansea, and in the local vehicle licensing offices throughout the country.

We also pleased that the report draws attention to the ludicrously inadequate level of fines imposed by the courts for VED evaders. The current average fine of £36 cannot possibly act as a deterrent against annual duty of £90 for private vehicles. We would hope that the honest motorist would heartily endorse a swinging increase in fines for such dodgers which they are subsidising.

We welcome any measures designed to catch more evaders—for example, local blitz campaigns by the police—provided we are given the staff to deal with the additional work generated. Clive G. Williams, Longview Road, Swansea.

The purpose of unemployment

From Mr R. Musgrave

Sir,—I have no doubt that profit or revenue sharing by employees has beneficial effects, but the central idea of Professor Weitzman's proposals (May 2)—namely that increasing firms' marginal net revenue product by revenue sharing will be a stimulant to the economy as a whole and it is flawed.

The idea certainly works if applied to one firm—General Motors to take his example, and it would work for the very working class of the economy as a whole. The problem is that while reducing unemployment, it fails to replace unemployment with any system that serves the purpose of unemployment: providing labour availability to bottleneck sectors of the economy, in the absence of such availability, the price of labour and products in such bottlenecks is bid up—ie, inflation ensues.

Marginal net revenue product-increasing systems (of which Prof Weitzman's is only one example) will work if the additional employees have the same incentive to look for alternative work (bottleneck relieving) as when unemployed. Job searching while unemployed is an inherently perfectly feasible: the majority of job changers in the US do so with no intervening unemployment. The only way of giving the above incentive is to have the remuneration of the additional employees equal to or only slightly above unemployment benefit, and the majority of people concerned will only take such work if they are threatened with benefit reduction or removal. R. S. Musgrave, 24 Gordon Avenue, Frome/Illogate Moor, Durham.

**David Wheeler of BUPA chose MSA's General Ledger Why?**

BUPA, the largest independent health care organisation in the country, is just one of the 250 major British organisations who depend upon mainframe Financial Software from MSA.

David Wheeler, Head of Finance at BUPA's head office in London, explains why MSA products were chosen.

"BUPA has diversified into a wide range of health care activities, including private hospitals, health screening and nursing agencies. We needed to install a flexible general ledger system to cope with the increased business, both for now and for years to come.

"We looked at the leading software manufacturers and finally chose MSA as we were very impressed by the scope of their products, their high level of customer support and commitment to provide their clients with the latest enhancements.

"Our association with MSA has proved to be so successful we have recently installed their micro-mainframe link system. This will enhance considerably the productivity of senior personnel by enabling them to draw down at will relevant extracts of information held by central processing.

"There is no doubt in my mind that MSA's software plays an important role in the timeliness and accuracy of decision making by BUPA management."

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## GATHERING TO CELEBRATE 20 YEARS OF ACHIEVEMENT

# Shaping Europe's future in space

BY PETER MARSH IN LONDON

LEADERS of Western Europe's space community meet today to discuss the shape of future projects. High on the list will be the U.S. invitation to Western Europe to join its programme for an \$8bn manned space station by the early 1990s.

Herr Reimar Lüst, who in September becomes the head of the 11-nation European Space Agency (ESA), cut his teeth on international technical projects 40 years ago, after a U.S. ship plucked him out of the sea. His U-boat had sunk, and he was a prisoner of war, but he helped his captors to restore a German submarine which was shown in a Chicago museum. Herr Lüst will be the space agency's third director general since it was formed nine years ago to take over the work on Western European space technology which started 20 years ago.

The themes of co-operation and competition with the U.S. will be much in evidence at ESA's anniversary celebrations at its science and technology research centre in Noordwijk, near Amsterdam. Speeches will be relayed by satellite links to several European countries and to the agency's rocket launch centre in Kourou, French Guiana. Among the guests will be Queen Beatrix of the Netherlands,

whose children are said to be particularly keen on space science.

President Ronald Reagan wants the Europeans to decide by the end of the year whether they will contribute to \$2bn in constructing the space base, which would stay in orbit some 300 miles above Earth and house scientific laboratories and prototypes of industrial plants.

Another talking point will be the next launch of the agency's Ariane rocket, due on May 22. The ninth Ariane will carry a satellite owned by GTE, the U.S. telecommunications company. It will be the first time that a U.S. space vehicle has been sent into orbit by anything other than an American booster. The launch will also be the first for which ArianeSpace, a semi-private body based near Paris, is responsible.

The company, owned by a mixture of private and public organisations in Europe including banks and aerospace companies, is setting itself up as one of first commercial satellite launchers. It is taking over the marketing of the rocket from ESA, though the space agency will continue to pay for improvements to the vehicle. Development costs have so far been £500m (£692m), 70 per cent provided by France.

The launch should help Ariane to challenge the dominance of American vehicles such as the space shuttle in putting satellites into orbit.

Competition with the U.S. in rocketry was an important element in the formation of ESA nine years ago. The space agency took over the work of two other organisations that started life in 1964 - the European Launcher Development Organisation (Eldo) and the European Space Research Organisation (Esro).

Eldo was formed to provide a European civilian launcher, called Europa. The UK was a leading light in the project: Britain's Blue Streak, which the British Government cancelled as a missile in 1960, was to take a civilian role by acting as the first rocket stage in Europa. France and West Germany were to provide the other parts to the vehicle.

But, after a series of technical setbacks, the project collapsed in the early 1970s. The led France, which was determined not to have to rely on the U.S. for satellite launchers, to marshal other countries behind the mainly French-built Ariane.

ESA, which spends some \$775m a year and has a staff of 1,300 based mainly in France, West Germany, Italy and the Netherlands, relies on

President François Mitterrand's Government for slightly less than a quarter of its budget.

The next biggest spenders are West Germany, which puts up 20 per cent, and Britain and Italy, which contribute 12 per cent each. The other members are Spain, Sweden, Switzerland, Belgium, the Netherlands, Ireland and Denmark.

Besides its work on further developing Ariane - for example, so that the rocket can take heavier satellites into space - the agency supports research on telecommunications, scientific and Earth-observation satellites.

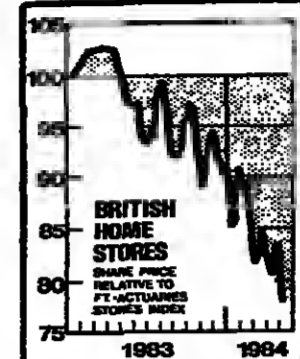
It has spent about \$692m developing Spacelab, an aluminium canister with room for several people, which rides into orbit in the cargo bay of the American space shuttle. Spacelab made its maiden flight last November, with a further mission due later this year.

ESA has become the more successful of European partnerships in technology - but beneath its harmonious surface ructions occasionally emerge as individual members try to push the agency in different directions.

The biggest split came in the late 1970s, when France and West Germany decided to co-operate outside ESA in a joint undertaking to build

## THE LEX COLUMN

# BHS designs a new Habitat



The stock market reputation of British Home Stores has been lacking in glitter for some time. Where a couple of years ago it was possible to rate the shares above those of Marks and Spencer, during the retailing revival of the past year the BHS share price has been left far behind the stores sector. The growth of profits, too, has been rather subnormal, by the standards set in most other retail leaders. At £55.2m before tax, profits for the year to March increased by just under 13 per cent, and would have looked distinctly sluggish without the 30 per cent rise in net interest income to £2.7m.

Balanced against this solid but pedestrian performance, BHS is at last able to show that it is committing its resources to a remodelling of the chain, giving the stores and the merchandise a more sharply focussed appearance - in a vein which should not be at odds with the group's use of Conran Associates at a strike force for the development of new product lines.

BHS is planning to spend about £60m on the store expansion and upgrading programme this year at the price of running net cash down to about £30m. Despite the lost turnover - a couple of weeks in each store that is given the treatment - and the interest income foregone, BHS should still advance by another 10 per cent to exceed £60m this year. But the market will want to see that the programme is paying off before BHS returns to a premium rating.

with it, reveals a sharp turnaround in housing, where the Canadian associate returned to profit, though its finances still look stretched. The UK end, too, changed from red to black, but the losses of the German equivalent will, it seems, be eliminated from now on. An £8m jump to £17.8m in associates' profits, meantime, owed much to the Kentucky coal mine, bought in 1982.

A combination of housing, mining and acquisitions should push 1984 profits to £32m, where a 25 per cent tax charge gives a 6 p/c on the shares, down 6p yesterday to 280p. The historic yield is 6 1/2 per cent. The rating still smacks of a contracting company, and it looks like that way yet awhile.

## Akroyd & Smithers

While bankers rush to secure their niches in securities market-making, the underlying trend of profitability in the business is distinctly unexciting, judging by a fall in half-time profits at Akroyd & Smithers from £9.43m to £7.75m. With the share price off 25p to 52p, Westing is still carrying a significant loss on its 29.9 per cent holdings bought at an average effective price of 60p.

At least Akroyd's profits are ahead of the depressed £6.6m earned in the second half last time, and adjusting for the extra two weeks in the comparable first period of the latest October-March result is only 11 per cent lower. But then, it should have been boosted by several months' benefit from the £1m injected by Westing.

A heavy stable gilt-edged market clearing explains much of Akroyd's lack of profits zip, and the gold sector has lacked excitement, too. At least there has been progressive action in UK equities on a rising market, but overseas equities have been variable. So with Akroyd spending money on a shiny new dealing room and investing in new international dealing operations, the near term looks uninspiring while further out the challenge will be to cope with the upheaval in the London stock market - notably with the prospect of a sizeable number of competing market-makers in gilts. But a p/c of around 12, annualising the first half, is reasonably sober.

# Fighting breaks out in Tripoli

BY PATRICK COCKBURN IN LONDON

FIGHTING broke out in Tripoli yesterday as Libyan security forces moved against dissidents in the commercial centre of the city.

Experienced observers in the capital denied reports that there had been an attempted coup against Col Muammar Gaddafi, the Libyan leader, and reports from Rome that a group using rockets and automatic weapons had attacked the barracks where Col Gaddafi lives.

Tripoli businessmen said the shooting started early yesterday morning after security forces had cleared residents from houses neighbouring an apartment block in the city centre.

The Italian news agency said that

Gaddafi attackers had been driven back by armoured vehicles and fled to nearby office buildings.

A group of 20 soldiers were said to be still resisting last night, but were completely surrounded by loyalist units.

The loyal forces then attacked the block, which apparently housed a cell of dissidents, with shooting continuing until 1.30 pm. Police apparently wanted people to stay indoors, but, contrary to early reports, the airport remained open.

The Libyan news agency said last night that a group of terrorists trained in Britain and Sudan had taken women and children hostages in a Tripoli apartment block but

# U.S. power company close to bankruptcy

By Terry Dodsworth in New York

PUBLIC SERVICE New Hampshire, the financially-troubled New England power company, is teetering on the brink of bankruptcy after failing to make a \$3m principal repayment on a loan from a consortium of banks.

The company is meeting its bankers this week in an attempt to arrange new financing. In a filing with the securities and exchange commission (SEC), it said that its bankers had declared it in default and had decided to "terminate their commitments to make further loans". It is due to make further principal repayments this week.

In early April, PS New Hampshire's auditors said that unless the company found additional sources of credit within the next few months it might be forced into bankruptcy and find itself "unable to continue in existence".

Since then, however, the utility company has taken steps to reduce its cash outflow drastically. The second reactor in the Seabrook nuclear power project, which caused the crisis through runaway costs, has been cancelled, and almost all work on the site halted.

In addition, payments on Seabrook have been suspended, 11 per cent of non-Seabrook workers Aid off, some salaries cut, and dividends on both common and preferred stock omitted. These measures were expected to tide the group through until at least the middle of this month.

It is not clear how the authorities would react if PS New Hampshire were forced into bankruptcy. The power industry in the U.S. is carefully regulated under state law, with controlled prices and profit margins on assets.

## Interest rates

If the London clearing banks were waiting for inspiration from the April money statistics in order to make their minds up about base rates, their weekend delay may not have been very illuminating. Since their own lending had increased by an underlying £700m in the banking month, it is easy to see why they may have been expecting an embarrassingly large expansion of Sterling M3. But the provisional increase, of only 1/2 per cent, is low enough to mean that the full figures have an interesting explanatory tale to tell, with the foreign currency items centre-stage.

The apparent good behaviour of those aggregates which are treated

# Prospective \$1.4bn bid for City Investing

By Paul Taylor in New York

CITY INVESTING, a New York-based group with sales last year of \$5.95bn and operations in manufacturing, printing, housing, consumer services and insurance, said yesterday that it has been approached by "a major financial institution" interested in acquiring the company.

City Investing's shares were suspended yesterday morning before the New York Stock Exchange opened. On Monday, the company's shares jumped \$4.25 to close at \$37.25 amid a wave of speculative buying. At that price the company is valued at about \$1.4bn.

Last year, City Investing's earnings jumped 34 per cent to \$175m from \$131m, fuelled by improvements in its domestic businesses which include manufacturing air conditioners, magazine printing, housing development and food vending services. Last month, the company signed a \$700m, 10-year contract to print four major Hearst Group magazines.

City Investing declined yesterday to provide any further details of the expected bid but added that it expected to make a further announcement today.

The company has, however, been the subject of repeated market rumours that it might be taken private either through a leveraged buyout or by one of the major shareholders in the company.

Last year, City Investing gave 14 of its senior executives "golden parachutes" which provided them with four times their annual base salary and other fringe benefits in the event of a takeover.

# UK upgrades North Sea oil and gas reserves estimate

BY IAN HARGREAVES IN LONDON

BRITAIN HAS considerably more reserves of oil and gas than was thought a year ago, according to the latest government estimates published yesterday.

The Department of Energy's annual Brown Book suggests that estimates published a year earlier understated oil reserves by between 18 and 23 per cent and gas reserves by between 8 and 28 per cent.

Mr Alick Buchanan-Smith, the Energy Minister, said that whilst some of the new figures needed to be read with caution, it was certain that Britain's period of oil self-sufficiency would be extended "for a number of years" into the 1990s.

It would not, he said, prevent North Sea oil production from peaking in the next year or so, but would soften the rate of decline.

The Brown Book paints a picture of an emerging boom in North Sea activity.

It shows that drilling reached an annual peak in 1983 and that progress has been maintained since the year end. Twenty-one significant discoveries were made in 1983, compared with only nine in 1982.

But as UK oil production rose to a new peak, of almost 115m tonnes in 1983, the Energy Department was also piecing together the results of a major phase of the continuous British Geological Survey and other information from oil companies to redraw the country's energy map.

The main contours of that map are:

- Oil reserves are now estimated to lie in the range 1.41bn to 5.28bn tonnes, compared with a range of 1.22bn to 4.22bn tonnes in last year's Brown Book.
- Gas reserves are put at 800 to 2300bn cubic metres, compared with 700-2100bn cubic metres in the year earlier estimate.

The revised oil estimates are partly a result of better than expected performance from existing fields, but chiefly reflect a more optimistic assessment of geological and operating data, especially in the central North Sea area between the 56th and the 62nd parallel.

The higher gas estimates reflect the increased level of drilling which has occurred since British Gas increased prices offered to suppliers. The higher reserve estimates are, however, something of an embarrassment to the gas corporation which is currently trying to convince Government of its need to import 20bn pounds of Norwegian gas from the Sleipner field.

The Brown Book also shows that British industry is more or less holding its market share in the offshore supplies business, winning 72 per cent of all orders placed last year, compared with 73 per cent in 1982.

The biggest areas of foreign penetration continued to be drilling, pipelines and installation work.

Backing for Norwegian gas imports, Page 9.

## Datastream in agreed £73m takeover bid

Continued from Page 1

Moody's, the U.S. credit rating agency - and has expanded into the broader business information area. Its UK subsidiary, established in 1957, produces regular statistics on the rate of British business failures.

D&B made pre-tax operating income of \$28.7m excluding discontinued operations, on turnover of \$1.5bn in 1983. It employs 25,000 people in 27 countries and its market capitalisation is \$3.2bn.

# EEC probes wine lake error

BY IVO DAWNAY IN BRUSSELS

THE EEC yesterday announced an investigation into the massive under-estimation of last year's wine production which has left the Community with a wine lake on a scale to make Bacchus blush.

According to British officials, the surplus is sufficient to fill 18,000 Olympic-sized swimming pools, while even European Commission sources concede that unsold stocks may amount to 3.2bn litres - 1.4bn litres higher than member states' original projections.

Farm Ministers meeting in Brus-

# Volcker attacked as prime rises

Continued from Page 1

Since the last increase in the benchmark bank lending rate on April 5, the three-month T-Bill rate has increased from 9.75 per cent to 9.93 per cent at the Monday close. The rate on three-month bank certificates of deposit was increased from 10.40 per cent to 10.75 per cent.

In the U.S. credit markets, however, the prime increase had little impact. The already depressed markets had their attention closely focused on the \$6.5bn three-year note auction yesterday which kicked off the \$16.5bn three-day Treasury quarterly refunding.

On Wall Street, share prices dipped immediately after the announcement but had recovered by lunchtime to post small gains. In the New York foreign exchange market the dollar held firm following its recent sharp upward movement.

Philip Stephens writes from London: The rise in U.S. prime rates brought further gains for the dollar on European currency markets, pushing sterling to an all-time low.

The rise came despite substantial intervention by the West German Bundesbank, which dealers estimated had sold between \$150m and \$250m in an effort to slow the U.S. currency's rise against the D-Mark.

| World Weather |           |
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| Amman         | C 18 F 64 |
| Amsterdam     | C 18 F 64 |
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| World Weather |           |
|---------------|-----------|
| Yokohama      | C 18 F 64 |
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SECTION II - INTERNATIONAL COMPANIES  
FINANCIAL TIMES

Wednesday May 9 1984

Look at Lovell  
FOR DEVELOPMENT

FEB  
MANUFACTURERS & SUPPLIERS  
OF BUILDING & CHEMICAL PRODUCTS  
FOR THE CONSTRUCTION INDUSTRY.

Setback  
for Cigna  
in first  
quarter

By William Hill in New York  
CIGNA, the major U.S. insurer which warned last month of "significant" first-quarter losses, made an operating loss of \$23.7m in the three months ending March 31, compared with an operating profit of \$76.8m a year ago.

National Semi  
signs pact  
with TI

By Louise Kehoe  
in San Francisco  
NATIONAL Semiconductor and Texas Instruments, two of the largest U.S. semiconductor manufacturers, have agreed on long-term, cooperative technical efforts on high-performance microprocessors.

VATICAN'S BANK SUBMITS TO ITALIAN LAW  
IOR in \$244m payout  
to Ambrosiano creditors

By ALAN FRIEDMAN IN MILAN  
THE VATICAN'S bank will pay \$244m on June 30 to the creditors of the failed Banco Ambrosiano group, and will agree for the first time to submit itself to the rule of domestic Italian law.

Austrian bank buys  
4.8% Amax stake

By OUR NEW YORK STAFF  
CREDITANSTALT-Bankverein, the leading Austrian bank, is investing around \$75m to acquire a 4.8 per cent stake in Amax, the biggest U.S. mining group, in an unusual deal ensuring a long-term supply of molybdenum to a metal-trading subsidiary.

U.S. securities dealer  
in bankruptcy filing

By TERRY DODSWORTH IN NEW YORK  
LOSSES running into several millions of dollars may be suffered by several U.S. school boards and other public agencies as a result of financial difficulties at Lion Capital, a New York trading and investment company in government securities.

structing London lawyers to draft a potential writ against the IOR. Now, the Ambrosiano settlement which the IOR is set to sign shortly, states that the agreement shall "be governed by and interpreted in accordance with Italian law."

Foreign  
banks seek  
Portugal  
operations

By Diana Smith in Lisbon  
SEVEN INTERNATIONAL banks have formally applied to open branches in Portugal, following liberalisation of the country's banking laws in February.

Siemens  
first-half  
profits at  
DM 410m

By Jonathan Carr in Frankfurt  
SIEMENS, West Germany's biggest electrical concern, boosted after-tax profit in the first half-year (ending March 31) to DM 410m (\$152m) from DM 348m in the corresponding period of 1982-83.

Scott & Fetzer  
rejects bid

By Our Financial Staff  
SCOTT & Fetzer, the Ohio-based publishing and manufacturing company, has rejected a \$426m leveraged buyout proposal from Mr Ivan Boesky, the Wall Street arbitrageur.

Netherlands top pension  
fund eyes Wereldhave

BY WALTER ELLIS IN AMSTERDAM

WERELDHAVE, the thriving Dutch-based property fund, has once again become the unwelcome target of a takeover bid from PGGM, the Netherlands' largest pension fund.

PGGM's property division has been in the news this year because of allegations, still under investigation, of malpractice. The property division's head and the director of investments were each dismissed.

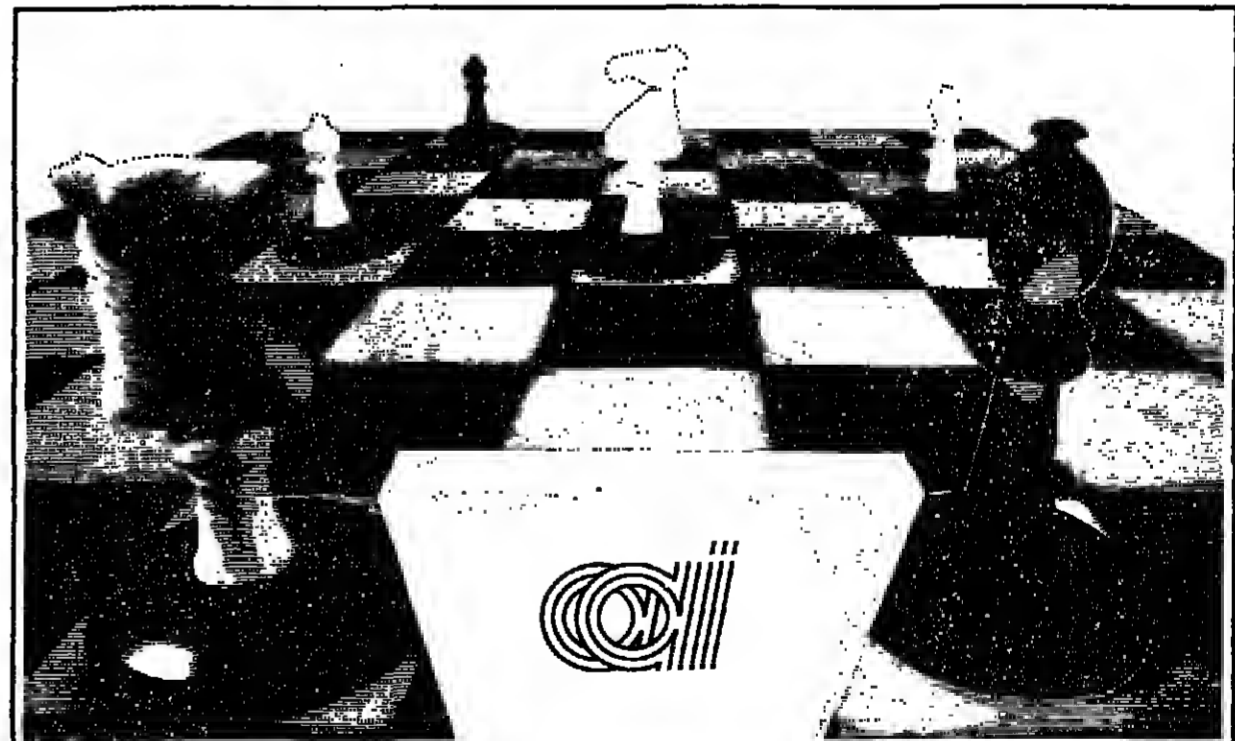
Good start to year for Sandoz

BY JOHN WICKS IN BASLE

SANDOZ, the Swiss chemical and pharmaceuticals concern, has started the year well, according to Dr Marc Moret, managing director of the Basle parent company.

Government approval for the takeover of the confectionery producer Ahlgrens. According to Mr Alexandre Jetzer, finance director, Sandoz has liquid assets of about SwFr 1.4bn despite the takeover in 1983 of the U.S. companies Sodyco and Zeecon, which together cost Sandoz about \$150m.

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INTL. COMPANIES & FINANCE

Australian broking first for Wardley

BY MICHAEL THOMPSON-NOEL IN SYDNEY

IN THE first foreign move into Australian sharebroking, Wardley Australia, the local merchant banking arm of Hong Kong and Shanghai Banking Corporation, is joining forces with Mr Rene Rivkin to establish Australia's first incorporated sharebroking firm, Rivkin Ltd.

Mr Rivkin was the founder of one of Australia's most prominent, aggressive, and profitable sharebroking houses, Rivkin and Company. Last month, it was announced that the partnership was being dissolved, with the firm's principals due to go their own ways.

Wardley will be pumping a little over A\$10m (U.S.\$9.2m) into the new firm, partly in direct equity, partly in subordinated debt and will hold a 14.97 per cent interest. It is its first move into sharebroking anywhere.

This is in line with the announcement by Mr Paul Keating, the federal Treasurer, at Easter that foreign holdings

in Australian sharebrokers were to be limited to single shareholders of 14.99 per cent, with overall foreign ownership not to exceed 40 per cent.

However, Wardley has retained the right to lift its stake in Rivkin Ltd to 50 per cent if the Labor Government relaxes its controversially tough attitude on foreign ownership of sharebroking firms.

Australian sharebroking was substantially deregulated last month, in tandem with further Government moves to liberalise the financial sector, such as removing deposit controls on banks, allowing them to offer interest on cheque accounts, and allowing about 20 merchant banks to obtain foreign exchange licences.

Mr Neil MacLachlan, Wardley Australia's managing director, said yesterday that deregulation of the Australian financial system in the past 12 months has probably exceeded that of the past 20 years.

"With the merchant banks' traditional money market and domestic lending activities likely to come under pressure from the domestic trading banks, we are keen to develop fee-based activities such as corporate finance, fund management, and broking."

A subsidiary, Wardley Australia Commodities, has a seat on the Sydney Futures Exchange, and Wardley has applied to the Reserve Bank for a foreign exchange licence. Wardley Australia's net profit in 1983 was just over A\$8m.

Rivkin Ltd will aim itself at the high-quality corporate, institutional and retail sectors, and hopes to emulate the success and innovative track record of Rivkin and Company, which in only 14 years (it was formed at the height of the "Posseidon boom") built itself into a firm that in terms of turnover rivalled the much longer established Ord Minnett.

In part, its high profile derived from its skilled involvement in major takeover

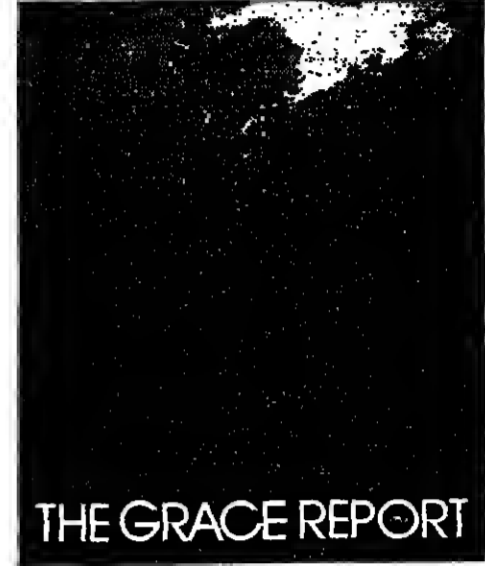
These eighteen Annual Reports represent the final pages of a 2-part series, designed to keep you informed on major North American companies.

Part I was featured Tuesday, May 8th.



Frank B Hall & Co. Inc. 1983 Annual Report

**Frank B Hall & Co. Inc.**  
Grace, the world's largest specialty chemical company, ranks 50th on the Fortune 500 list with 1983 sales of \$6.2 billion. Other businesses include agricultural chemicals, natural resources, retailing and restaurants. 1984 marks the 50th consecutive year of dividends. Currently the Company pays \$1.00 annual dividends NYSE symbol FBH. The Hall report reviews Election Issues through the exclusive commentary of noted authorities in politics, economics, business, and academics.



**THE GRACE REPORT**  
Grace, the world's largest specialty chemical company, ranks 50th on the Fortune 500 list with 1983 sales of \$6.2 billion. Other businesses include agricultural chemicals, natural resources, retailing and restaurants. 1984 marks the 50th consecutive year of dividends. Currently the Company pays \$1.00 annual dividends NYSE symbol FBH. The Hall report reviews Election Issues through the exclusive commentary of noted authorities in politics, economics, business, and academics.

China Underwriters winding up

BY DAVID DODWELL IN HONG KONG

HONG KONG'S high court yesterday issued the long-awaited winding-up order for China Underwriters Life and General Insurance, the insurance subsidiary of the collapsed Carrion group.

The petition to wind up China Underwriters (CUL) was made by Mr Noel Gleeson, Hong Kong's registrar general, in October last year and was the first move towards liquidation of a Carrion group company. Delay in granting the petition was due in part to a delay in disposing of the insurers branch operations in Thailand.

Mr Gleeson said yesterday that he is likely to be appointed official receiver once a regulating order is passed in the high court—which is expected today. Mr Gleeson has been provisional liquidator for the company since October.

CUL declared shareholders' fund of HK\$30.7m (US\$18.8m) in its last published balance sheet—for 1981. In common with other companies in the Carrion group, its accounts have been published for 1982.

A winding-up petition against Carrion Investments, which had been quoted on the Hong Kong stock exchange, was made within days of the application to wind up China Underwriters. This was in turn swiftly followed by a petition to wind up the group's parent company, Carrion Holdings.

Carrion group directors Mr George Tan and Mr Bentley Ho face fraud charges and are scheduled to appear at a committal hearing in the Hong Kong magistrates' court in September. Debts attributable to Carrion group companies, and companies controlled privately by Mr Tan, are estimated to exceed HK\$100m. The group's largest creditor is understood to be Bank Bumiputra Malaysia.

Malaysian government officials yesterday denied that Bumiputra Malaysia Finance (BMF) in Hong Kong has been ordered to wind up its operations by its parent, the government-backed Bank Bumiputra, reports AP-DJ from Kuala Lumpur.

BMF was still carrying out normal operations and was continuing to provide loans, the officials said.

BMF was reported to have loaned more than U.S.\$1bn to the troubled Carrion group, Eda Enterprise, and others in Hong Kong and was facing difficulties in recovering the loans. The Auditor General is investigating the loans.

Advance by Casio Computer

By Yoko Shibata in Tokyo

CASIO COMPUTER, one of Japan's largest manufacturers of electronic calculators, lifted unconsolidated pre-tax profits by 12 per cent to Y14.12bn (\$62m) for the year to March 20 1984 and net profits by 13.7 per cent to Y6.51bn. Sales reached Y176.37bn, up by 8.4 per cent. Profits per share were Y42.99, against Y42.94.

Sales of desk top calculators, accounting for 46.3 per cent of the total and digital watches, accounting for 32.7 per cent, grew by 8.3 per cent and 9.2 per cent respectively having been limited by the continuing downward pressure of prices. However, sales of office computers and electronic musical instruments surged by 26.3 per cent to account for 20.5 per cent of turnover.

In order to finance an active capital investment programme, Casio raised Y15bn in the year through domestic convertible debentures and \$80m through the issue of debentures in the Euro market.

Casio forecasts sales to rise by 13.4 per cent to Y200bn in the current year pre-tax profits by 13.3 per cent to Y16bn.

The company expects favourable sales contributions from its liquid crystal TV sets and other new product lines. Capital outlays of Y14bn, compared with Y9bn, are planned for the expansion of production capacity, rationalisation, and the development of new products.

Nampak faces more competition

BY OUR JOHANNESBURG CORRESPONDENT

NAMPAK, the packaging arm of the Barlow Rand Industrial group, and its 51 per cent-owned subsidiary Metal Box South Africa, faced considerable competition in their first six months of association.

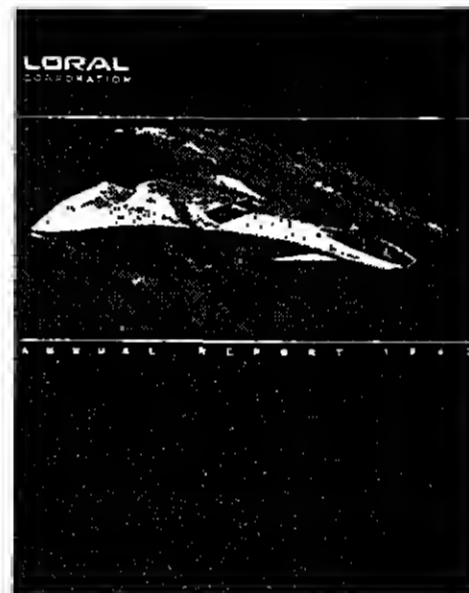
Nampak acquired control of Metal Box from the company's erstwhile British parent with effect from the start of last October as part of a general restructuring of the two companies' operations. As a result the performances recorded in the six months ended March 31

1984 are not comparable with those of previous periods.

Metal Box earned a pre-tax profit of R28.5m (\$2.9m) on a turnover of R332m during the half year. It has declared an interim dividend of 10 cents from earnings of 26.5 cents a share.

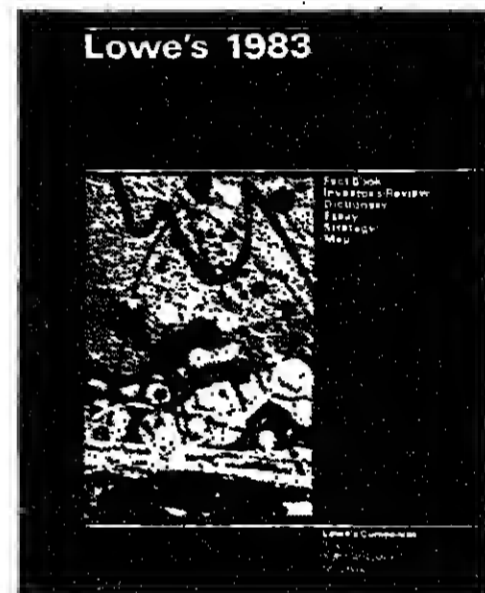
Strong consumer demand for beverage cans ensured buoyant sales says Mr Bas Kardol, its chairman. However, he adds that the drought and recession adversely affected other operating divisions. The new glass container plant operated satisfactorily and is to be expanded at a cost of about R50m by the addition of a second furnace.

Nampak earned a consolidated pre-tax profit of R73.6m on a first-half consolidated turnover of R611.5m. Mr Kardol warns that increased competition in a number of the group's markets is likely to persist for some time, nevertheless he expects the year's dividend total to be not less than the 70 cents paid in the past financial year. An interim dividend of 32 cents has been declared from first-half earnings of 85 cents a share.



**Loral Corporation**  
Electronic warfare is rapidly becoming an integral part of the defence systems of all western countries. Loral Corporation is a leading supplier of electronic warfare systems to the United States and its allies, and has recently expanded into the related areas of microwave integrated circuits, instrumentation, information and graphic display systems, telemetry, space and military communications.

The company has achieved record sales and earnings in each of the past ten years. Its backlog of orders approaches \$600 million, and the continuation of its increasing performance is virtually assured by its large and diverse portfolio of major, long-term EW production programs.



**Lowe's Companies**  
Lowe's Companies, Inc., one of America's most unusual companies operating in one of America's most important industries—home building and home improvement—issues the world's most unusual Annual Report. A user-friendly publication, the Lowe's report, honoured for its thoroughness and distinctiveness, offers its readers an unparalleled opportunity to understand not only the company as an investment but to understand the industry and the economy.

Rights issue abandoned

SINGAPORE — City Development, the property owner and developer, said that the stock exchange of Singapore has rejected its application for the listing and quotation of equity arising from a rights issue of S\$90m of unsecured seven-year loan stock bearing transferable subscription rights.

Consequently, the company has abandoned plans for the rights issue, originally proposed on January 26.

City Developments originally proposed the offering to raise medium-term fixed-rate financing to replace a portion of the group's short-term floating-rate debt.

NZ to get tougher over finance house loan levels

BY DAI HAYWARD IN WELLINGTON

NEW ZEALAND finance houses which have failed to comply with government requirements aimed at lowering interest rates will face new penalties according to Sir Robert Muldoon, the Prime Minister.

Last December the Government restricted finance houses to a 1 per cent per month increase in lending but some companies have exceeded this level. Competition for funds has also kept interest rates higher than the Government wishes, said the Premier.

The form of the penalty being imposed on those who have not

Expansion for General Corporation

By Wong Subong in Kuala Lumpur

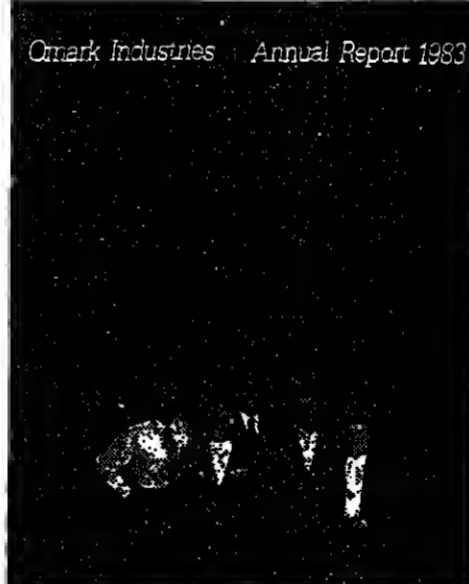
GENERAL CORPORATION, the diversified Malaysian group, is embarking on two major projects—the acquisition of two rubber estates worth 54m ringgit (US\$23.5m) and the development of a major commercial complex costing 154m ringgit.

The company, which is controlled by Tan Sri Low Keng Huat, a prominent developer, said the two estates—Ladang Juntai and Sekilau—have 7,240 acres of rubber and palm oil and an oil palm mill. Both estates are in Pahang state.

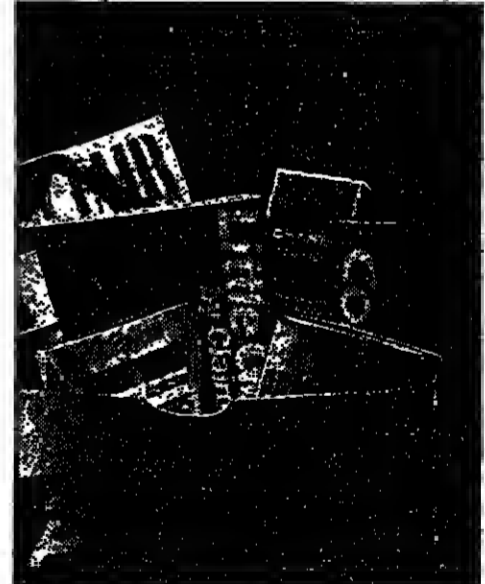
General Corporation will pay 39m ringgit for Ladang Juntai to be satisfied by 30m ringgit in cash and an issue of 3.6m new shares priced at 2.5 ringgit each. The price for Sekilau is 15m ringgit to be satisfied by the issue of 6m new shares.

On completion of the acquisitions, the company's paid-up capital would increase from 118.3m ringgit to 126m ringgit. The company also announced that it has formed a joint venture with the Kedah State government to develop a 15-acre property in Alor Setar, the state's capital.

The development will have 1.2m sq ft of office and shopping space, and parking for 1,100 cars. The cost of the development is estimated at 154m ringgit over four years, and the joint venture is expected to earn 57m ringgit in profits.



**Omark Industries**  
Omark (NYSE:OMK) is a leading producer of equipment for harvesting timber, of products for the home handyman and of sporting ammunition. It is the world's leading producer of cutting chain for chain saws. Sales in fiscal 1983 ended last June were \$252 million. Since then sales and earnings have expanded rapidly. Omark was recently featured in a major U.S. business publication as a leading implementer of Japanese manufacturing techniques.



**Pay Less Drug Stores Northwest, Inc.**  
Pay Less Drug Stores Northwest, Inc., an Oregon-based Company, is one of the largest retail drug chains in the United States, operating 149 stores in California, Oregon, Washington, Idaho and Nevada. Pay Less Stores have an average of 30,000 square feet of selling space with average sales of \$5.8 million per store.

Recent Operating Results:

|          | Year Ended January 31, (In thousands, except per share data) |           | Five Year Compound Rates of Growth |
|----------|--|-----------|------------------------------------|
|          | 1984   | 1983      |                                    |
| Sales    | \$852,937  | \$784,704 | 19.8%                              |
| Earnings | \$24,721   | \$19,375  | 20.2%                              |
| EPS      | \$1.35   | 1.07      | 19.2%                              |

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## TransCanada Pipelines

James W. Kerr      Robert H. Knight      Robert J. Richardson

TransCanada Pipelines has announced that James W. Kerr, who retired as Chairman and Chief Executive Officer of the Company in 1979, has also retired from the Board of Directors of the company, having reached the mandatory age of retirement.

The Company has also announced the election of Robert J. Richardson of Montreal, and Robert H. Knight of New York, as Directors of the Company. Dr. Richardson has been recently named President of Bell Canada Enterprises, after a distinguished career with the duPont Company in Canada and the United States.

Mr. Knight is a senior partner at Shearman & Sterling, the largest corporate legal firm in New York. Mr. Knight, who has been associated with Shearman & Sterling for nearly 35 years, also served as an advisor to the Eisenhower and Kennedy administrations.

**CORRECTION NOTICE**

**ENERGY RESOURCES & SERVICES INCORPORATED**

Net Asset Value 30th April 1984  
**\$8.28**  
per share (unaudited)

**PAN - HOLDING SOCIETE ANONYME LUXEMBOURG**

As of April 30, 1984, the unconsolidated net asset value was US\$165,382,063.38, i.e. US\$236.26 per share of US\$50 par value.

The consolidated net asset value per share amounted as of April 30, 1984, to US\$240.18.

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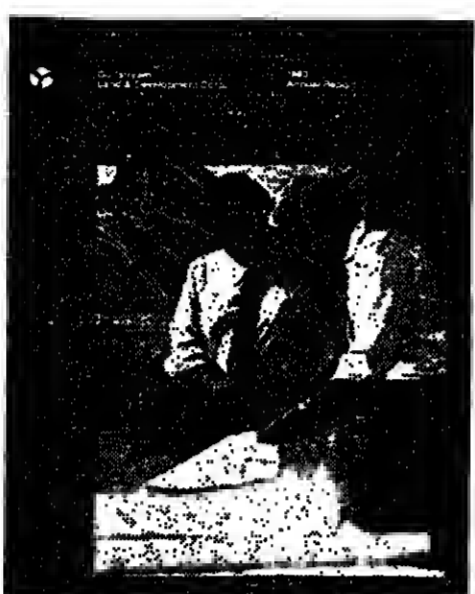
# Investors Update

# 2

Part 1 was featured Tuesday, May 8th.



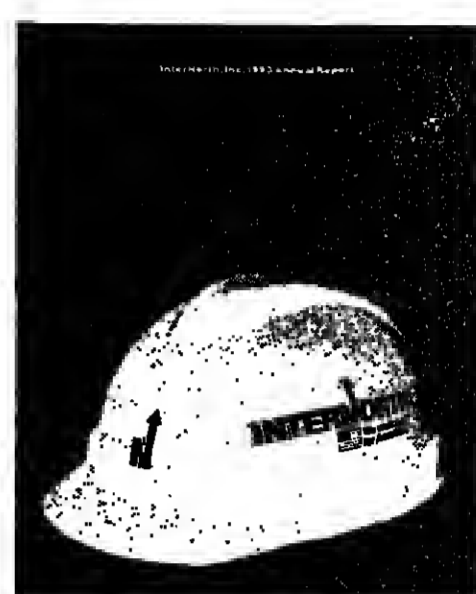
**Georgia-Pacific Corporation**  
Georgia-Pacific is one of the world's largest forest products companies, with record sales of \$6.5 billion in 1983, a 20% increase. Preparations for the future included a comprehensive asset-review and streamlining programme, substantial strengthening of the balance sheet, and a re-alignment of the management structure to better capitalize on new investment opportunities. The end result is improved efficiency and productivity. Georgia-Pacific is now firmly positioned for future growth in quality earnings.



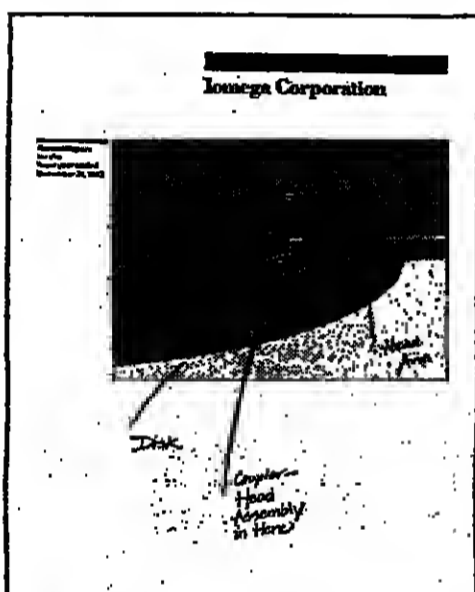
**Gulfstream Land & Development Corp.**  
Gulfstream, a Florida developer has three principal businesses: community development, homebuilding and general construction. It is developing four large-scale communities near Fort Lauderdale, Orlando, Sarasota and Jacksonville. Principal homebuilding operations are in Orlando. Its construction companies have broad capabilities and experience throughout Florida. Consolidated assets total \$175 million and net worth is \$90 million. The company has a strong balance sheet.



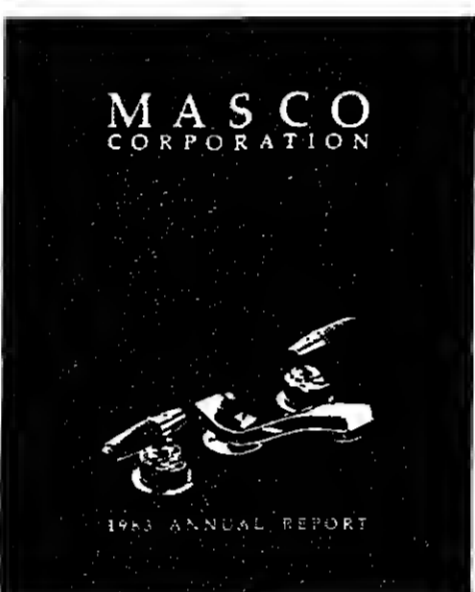
**Holiday Inns, Inc. (HIA)**  
Holiday Inns, Inc., is a leading hospitality company with interests in hotels, casinos and restaurants. Recently introduced new all-suite and economy hotel brands and the Spring, 1984 opening of a second Atlantic City casino will bolster the company's hotel and gaming businesses. Earnings per share in 1983 rose over 31 per cent to \$3.28 and have increased an average of nearly 15 per cent per year since 1978. Shareholders' equity reached \$1 billion in 1983, and cash flow from continuing operations in 1983 was more than double the 1979 level.



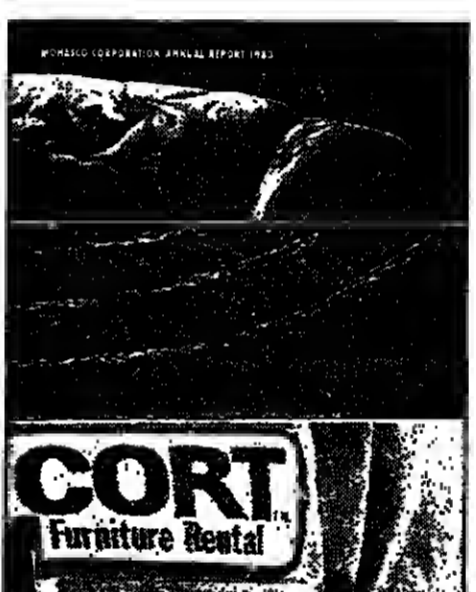
**InterNorth, Inc.**  
A 41% increase in net income from continuing operations was attained in 1983 by InterNorth, an international energy-based corporation involved in exploration and production of oil and natural gas, natural gas transportation and distribution, liquid fuels and petrochemicals. Net income from continuing operations was \$255.4 million, yielding earnings per share of \$5.29, a 30% increase over 1982. Operating revenues were \$5 billion, 20% higher than in 1982.



**Iomega Corporation**  
Iomega Corporation produces a family of disk drive products based on a proprietary head/disk technology which offers the user-friendliness of floppy disk systems with the rapid access time and high capacities of rigid disks. Revenues reached \$2.9 million in the last quarter of 1983 with rapid growth expected this year. An original equipment manufacturers version and a unit for retail distribution for use with such popular machines as the IBM PC TM are available.



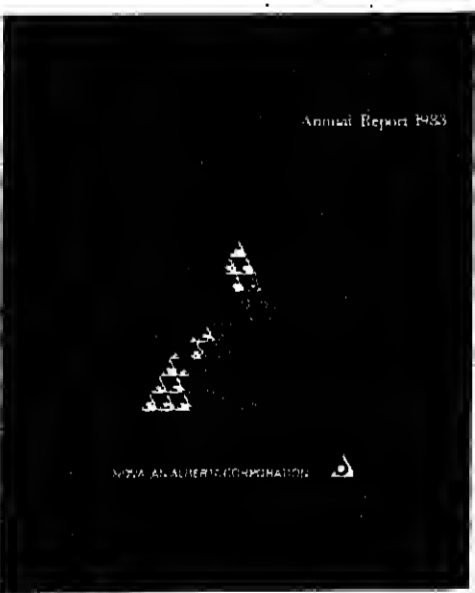
**Masco Corporation**  
Masco Corporation, a diversified manufacturing company with leadership market positions, has REPORTED 27 CONSECUTIVE YEARS OF EARNINGS GROWTH. Masco manufactures faucets, plumbing fittings, builders' hardware, steel measuring tapes, v-oting and ventilating equipment, insulation products, waterpumps, and other building and home improvement products, scanning monitors, recreational accessories, metal office products, and other products for the home and family; oil-field equipment, specialty valves and closures, and a broad range of other products for industry. Set for our 1983 Annual Report to learn why we believe Masco's sales, from internal growth alone, will more than double over the next five years.



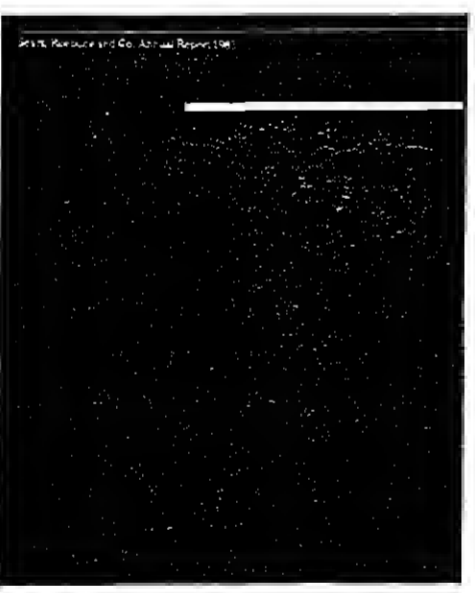
**Mohasco Annual Report**  
Mohasco's record earnings from domestic operations and sharply increased net income in 1983 demonstrated the impact of an aggressively-led turnaround, which is capitalising on emerging opportunities in growing interior furnishings markets. Results in 1984 and beyond should reflect further benefits from Mohasco's revitalisation programme. A Fortune 500 company, Mohasco is a leader in the manufacture, distribution and rental of interior furnishings.



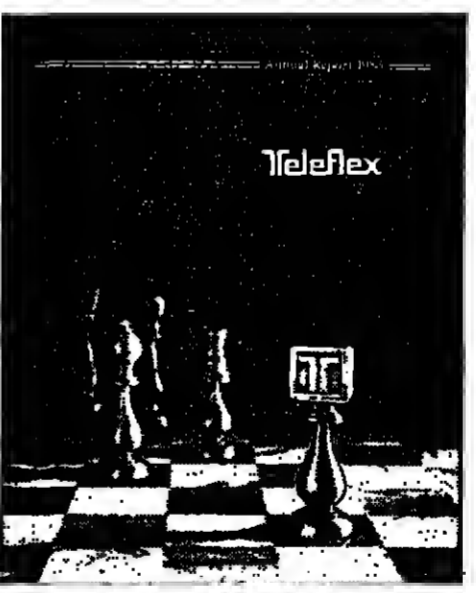
**Nabisco Brands, Inc.**  
Nabisco Brands, Inc., with sales of \$6 billion, is a major manufacturer, processor and distributor of packaged food in the United States, Canada and abroad. The company is a leading producer of cookies and crackers, margarines, consumer yeast, nut and snack products, hot and cold breakfast cereals, desserts, confectionery products and pet foods. It is also a supplier of food ingredients and imports beers into the United States.



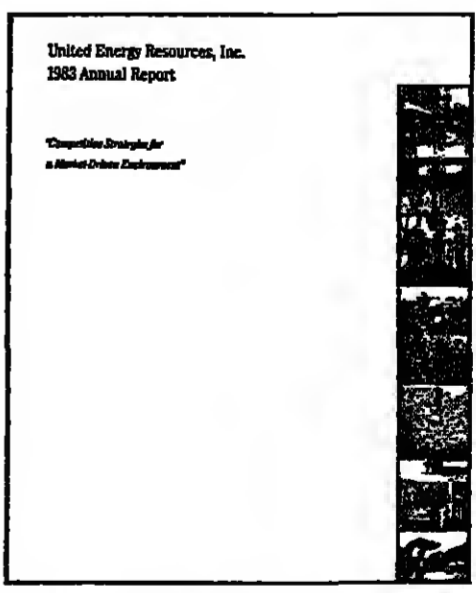
**NOVA**  
NOVA, AN ALBERTA CORPORATION is a major Canadian energy company headquartered in Calgary, Alberta. NOVA employs more than 8,600 people in activities related to natural gas transportation and marketing, petroleum, petrochemicals, manufacturing, and consulting and research. At year-end 1983, NOVA assets totalled \$6.8 billion and revenue amounted to \$3.8 billion. Net income was \$150.7 million (before extraordinary deductions). NOVA trades on the Toronto, Montreal and Alberta stock exchanges.



**Sears, Roebuck and Co.**  
The corporation achieved record revenue and net income gains in 1983. Net income increased 56% to \$1.34 billion or \$3.80 per share. Revenues were \$35.88 billion, an increase of 19.5%. Sears, Roebuck and Co. is aggressively pursuing profitable expansion through its five principal business segments: Sears Merchandise Group; Allstate Insurance Group; Dean Witter Financial Services Group; Coldwell Banker Real Estate Group, and Sear World Trade, Inc.



**Teleflex**  
Teleflex revenues increased for the ninth consecutive year to \$130.7 million. Operating earnings increased 18%... from slightly over \$8 million in 1982 to \$9.5 million in 1983. Earnings per share from operations were \$1.83 in 1983... compared to \$1.71 in 1982. Teleflex Incorporated is an applications engineering company which is dedicated to solving problems by the design, development, and marketing of specialised technologies.



**United Energy Resources, Inc.**  
The theme of the 1983 United Energy Resources, Inc. Annual Report is "Competitive Strategies for a Market-Driven Environment", and the report highlights the steps taken by UER in 1983 to improve its competitive position were the reduction of purchased gas costs and the formation of new marketing organisations.

Part of a 2 1/2 page series appearing on May 8th, and May 9th.

Please send me the following Annual Reports:

- 13 NOVA
- 14 Onank Industries
- 15 Pay Less Drug Stores Northwest, Inc.
- 16 Teleflex
- 17 Sears, Roebuck and Co.
- 18 United Energy Resources, Inc.
- 19 Nabisco Brands, Inc.
- 20 Mohasco Annual Report
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- 24 Iomega Corporation
- 25 InterNorth, Inc.
- 26 Holiday Inns, Inc. (HIA)
- 27 Frank B Hall & Co. Inc.
- 28 Gulfstream Land & Development Corp.
- 29 Grace
- 30 Georgia-Pacific Corporation

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- 1 Ametek
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- 6 City Investing Company
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INTL. COMPANIES & FINANCE

North American Quarterly Results

| Company   | 1984  | 1983  | 1984  | 1983  |
|---|---|---|---|---|
| <b>ACME-CLEVELAND</b><br>Machine tools                            | Revenue: \$1m<br>Net profit: 1.8m<br>Net per share: 1.8m        | Revenue: \$4m<br>Net profit: 5.4m<br>Net per share: 5.4m        | Revenue: \$1m<br>Net profit: 1.8m<br>Net per share: 1.8m        | Revenue: \$4m<br>Net profit: 5.4m<br>Net per share: 5.4m        |
| <b>COASTAL</b><br>Diversified energy co.                          | Revenue: 1,820m<br>Net profit: 50.2m<br>Net per share: 2.34     | Revenue: 1,520m<br>Net profit: 14.1m<br>Net per share: 0.68     | Revenue: 1,820m<br>Net profit: 50.2m<br>Net per share: 2.34     | Revenue: 1,520m<br>Net profit: 14.1m<br>Net per share: 0.68     |
| <b>GENSTAR</b><br>Property  | Revenue: 317.7m<br>Net profit: 3.8m<br>Net per share: 0.25      | Revenue: 330.2m<br>Net profit: 4.9m<br>Net per share: 0.29      | Revenue: 317.7m<br>Net profit: 3.8m<br>Net per share: 0.25      | Revenue: 330.2m<br>Net profit: 4.9m<br>Net per share: 0.29      |
| <b>NOVA</b><br>Natural gas transmission                           | Revenue: \$46.2m<br>Net profit: 3.6m<br>Net per share: 0.73     | Revenue: \$47.0m<br>Net profit: 3.7m<br>Net per share: 0.74     | Revenue: \$46.2m<br>Net profit: 3.6m<br>Net per share: 0.73     | Revenue: \$47.0m<br>Net profit: 3.7m<br>Net per share: 0.74     |
| <b>GEORGE WESTON</b><br>Retailing, food products                  | Revenue: 1,810m<br>Net profit: 12m<br>Op. net per share: 0.61   | Revenue: 1,740m<br>Net profit: 12.5m<br>Op. net per share: 0.61 | Revenue: 1,810m<br>Net profit: 12m<br>Op. net per share: 0.61   | Revenue: 1,740m<br>Net profit: 12.5m<br>Op. net per share: 0.61 |
| <b>PS NEW HAMPSHIRE</b><br>Electricity                            | Revenue: 146.8m<br>Net profit: 15.7m<br>Net per share: 0.31     | Revenue: 120.8m<br>Net profit: 13.8m<br>Net per share: 0.27     | Revenue: 146.8m<br>Net profit: 15.7m<br>Net per share: 0.31     | Revenue: 120.8m<br>Net profit: 13.8m<br>Net per share: 0.27     |
| <b>COLGATE-PALMOLIVE</b><br>Household, health care products       | Revenue: 1,410m<br>Net profit: 104.45m<br>Net per share: 2.91   | Revenue: 1,150m<br>Net profit: 105.2m<br>Net per share: 2.99    | Revenue: 1,410m<br>Net profit: 104.45m<br>Net per share: 2.91   | Revenue: 1,150m<br>Net profit: 105.2m<br>Net per share: 2.99    |
| <b>CONSOLIDATED NATIONAL GAS</b><br>Natural gas system            | Revenue: 1,410m<br>Net profit: 104.45m<br>Net per share: 2.91   | Revenue: 1,150m<br>Net profit: 105.2m<br>Net per share: 2.99    | Revenue: 1,410m<br>Net profit: 104.45m<br>Net per share: 2.91   | Revenue: 1,150m<br>Net profit: 105.2m<br>Net per share: 2.99    |
| <b>HALLIBURTON</b><br>Oilfield services                           | Revenue: 1,230m<br>Net profit: 75.7m<br>Op. net per share: 0.64 | Revenue: 1,320m<br>Net profit: 67.4m<br>Op. net per share: 0.57 | Revenue: 1,230m<br>Net profit: 75.7m<br>Op. net per share: 0.64 | Revenue: 1,320m<br>Net profit: 67.4m<br>Op. net per share: 0.57 |
| <b>HOUSEHOLD INTERNATIONAL</b><br>Retailing, finance              | Revenue: 1,820m<br>Net profit: 44.2m<br>Net per share: 0.75     | Revenue: 1,810m<br>Net profit: 36.2m<br>Net per share: 0.51     | Revenue: 1,820m<br>Net profit: 44.2m<br>Net per share: 0.75     | Revenue: 1,810m<br>Net profit: 36.2m<br>Net per share: 0.51     |
| <b>INTERMORPH</b><br>Diversified energy company                   | Revenue: 2m<br>Net profit: 103.5m<br>Net per share: 2.72        | Revenue: 1.35m<br>Net profit: 102m<br>Net per share: 2.30       | Revenue: 2m<br>Net profit: 103.5m<br>Net per share: 2.72        | Revenue: 1.35m<br>Net profit: 102m<br>Net per share: 2.30       |
| <b>ICI COMMUNICATIONS</b><br>Long-distance communications         | Revenue: 474.7m<br>Net profit: 5.8m<br>Net per share: 0.03      | Revenue: 371.6m<br>Net profit: 63.1m<br>Net per share: 0.24     | Revenue: 474.7m<br>Net profit: 5.8m<br>Net per share: 0.03      | Revenue: 371.6m<br>Net profit: 63.1m<br>Net per share: 0.24     |
| <b>DOMESTIC CANADA</b><br>Oil and gas, 48% held by Dome Petroleum | Revenue: 508.0m<br>Net profit: 23.9m<br>Net per share: 1.20     | Revenue: 416.0m<br>Net profit: 700.00m<br>Net per share: 0.08   | Revenue: 508.0m<br>Net profit: 23.9m<br>Net per share: 1.20     | Revenue: 416.0m<br>Net profit: 700.00m<br>Net per share: 0.08   |
| <b>DOVITAN</b><br>Chemicals, pulp, paper                          | Revenue: 508.0m<br>Net profit: 23.9m<br>Net per share: 1.20     | Revenue: 416.0m<br>Net profit: 700.00m<br>Net per share: 0.08   | Revenue: 508.0m<br>Net profit: 23.9m<br>Net per share: 1.20     | Revenue: 416.0m<br>Net profit: 700.00m<br>Net per share: 0.08   |
| <b>FRANK S. HALL</b><br>Insurance broker                          | Revenue: 55.8m<br>Net profit: 3.6m<br>Net per share: 0.28       | Revenue: 83.7m<br>Net profit: 7m<br>Net per share: 0.28         | Revenue: 55.8m<br>Net profit: 3.6m<br>Net per share: 0.28       | Revenue: 83.7m<br>Net profit: 7m<br>Net per share: 0.28         |

Prudential of the U.S. spreads its investments into foreign stocks

BY TERRY DODSWORTH IN NEW YORK

LIKE MANY other U.S. investment institutions, Prudential, the major mutual insurance company, and the biggest portfolio manager in the country, passed through the 1970s with only a marginal interest in overseas stock markets. Its development since then displays in microcosm what has been happening on a much wider scale: U.S. fund managers may have caught on to the trend towards international investment well behind their foreign counterparts, but with their overseas equity commitments last year offsetting about 70 per cent of the flow of overseas funds into Wall Street, they are quickly making up for the delay.

Prudential's decision to become more aggressive overseas goes back to the late 1970s when it set up a committee to look at the pros and cons of the move. It already had plenty of experience of operating in foreign markets. It had for example, bought shares in Sony, Hitachi and Matsushita in the 1960s, before Japan had become fashionable, and it later bought into European Blue Chips, such as Royal Dutch/Shell, Unilever and Electrolux. But its exposure was nevertheless limited, and more in the point, opportunistic rather than planned.

Two broad conclusions emerged from the report. In common with other study groups, the Prudential team concluded that it could reduce its investment risk—or its overall portfolio volatility—and increase its rate of return by not limiting its investments to the U.S. alone. "Some 50 per cent of market capitalisation is outside the U.S., and we felt that we should broaden our opportunities," says Mr Wallace Wormley, vice-president in charge of foreign portfolios. Secondly, the Prudential felt that overseas experience would teach it more about newly-emerging competitive overseas. One set of com-



petitors were the industrial companies that were posing an increasing challenge to the U.S. groups in which the Prudential's funds were invested. But it was also interested in potential rivals in the financial markets. Foreign involvement, it felt, would give it a closer look at the banks and securities houses which were becoming more aggressive in the pursuit of the investment funds on which its own operations were based. Four years ago, the company launched two pilot projects, one for foreign equities and another for bonds. Methodically, it established a network of brokerage agents across the world, and began to build up its own back office expertise in overseas accounting, foreign exchange, tax and regulations.

All this was set up to manage the Prudential's own assets. But by 1982, it was ready to launch similar investment vehicles for its pension fund clients. "We usually test market a product for ourselves, and if the project makes sense for us we design a clone for the pension funds," says Mr Wormley. The initial target has been to commit 10 per cent of total equity funds to overseas stocks, and to achieve that figure across a broad base. By UK standards, where portfolio managers have raised their sights to around a 20 to 25 per cent commitment to foreign markets, this was a somewhat low objective. But Mr Wormley says it is a question of cautious development. "Based on our studies, an optimal portfolio would have 20 to 30 per cent in non-U.S. securities. But we feel we have

**PRUDENTIAL INSURANCE**

December 31 1983

|                       | Own account \$m | Funds under management \$m |
|-----------------------|-----------------|----------------------------|
| Total funds           | 42,060          | 29,900                     |
| Common stocks held    | 1,700           | 5,200                      |
| Foreign stocks target | 170             | 500                        |
| Foreign stocks held   | 128             | 262                        |

overall weighting in equities. As an insurance company, the Prudential is more concerned to match its assets to its liability structure, while the pension funds are more interested in maximising their returns. By the end of 1983, out of a total of \$72.2bn of assets, the Prudential had \$30bn under management for pension fund clients. Of this, \$5.2bn was invested in equities, of which \$282m was in overseas stocks, against the target figure of \$500m. Out of its own investments of \$42bn, the insurance group had \$1.7bn in common stocks, of which \$128m was off-shore—compared with the goal of \$170m. The overseas fund portfolio managed for clients achieved a rate of return of 14.6 per cent in 1982, against 23.7 per cent for the group's U.S. equity investments. But last year, as the U.S. stock market began to stall, the foreign portfolio stormed ahead to a 25.6 per cent return against 20.7 per cent for the U.S. equity investments. "I might have \$3m in Phillips and 25 other Dutch stocks. We are also very careful about execution. So when they say that the Americans are coming, it is not us."

This advertisement complies with the requirements of the Council of The Stock Exchange in London. It does not constitute an offer of, or invitation to subscribe for or to purchase, any securities.

**Canadian \$75,000,000**

**Province of New Brunswick**

**Floating Rate Notes due May 1994**

The following have agreed to subscribe or procure subscribers for the Notes:

**Salomon Brothers International Limited**

**Credit Suisse First Boston Limited**      **IBJ International Limited**

**LTCB International Limited**              **Samuel Montagu & Co. Limited**

**Société Générale de Banque S.A.**        **Union Bank of Switzerland (Securities) Limited**

**S. G. Warburg & Co. Ltd.**

**Nesbitt Thomson Limited**                **Richardson Greenshields of Canada (U.K.) Limited**

The Notes, issued at 100 per cent., have been admitted to the Official List by the Council of The Stock Exchange subject only to the issue of the temporary global Note.

Interest, which will be payable quarterly in arrears, will (subject to a minimum rate of 5 1/4 per cent. per annum) be at a rate per annum equal to 1/2 of one per cent. above U.S. dollar LIBOR fully hedged into Canadian dollars. (Please refer to the Exel card mentioned below for a full description of the interest rate calculation). The first payment of interest will be payable on the interest payment date falling in August 1984.

The Notes will mature in May 1994. Province of New Brunswick (the "Issuer") has the option to redeem all or some of the Notes at their principal amount on any interest payment date falling in or after May 1985.

Particulars of the issuer and the Notes are available in the Exel Statistical Service and copies of the particulars of the Notes may be obtained during usual business hours up to and including May 23, 1984 from:

**Rowe & Pitman**  
City-Rate House  
38-45 Finsbury Square  
London EC2A 1JA

May 9, 1984

**U.S. \$40,000,000**

**Genossenschaftliche Zentralbank**  
Aktiengesellschaft  
Vienna

**Floating Rate Notes Due 1989**

In accordance with the provisions of the Notes, notice is hereby given that for the three month interest period from 9th May, 1984 to 9th August, 1984 the Notes will carry an interest rate of 11 1/4% per annum. The relevant interest payment date will be 9th August, 1984 and the Coupon Amount per U.S. \$1,000 will be U.S. \$28.91.

**Credit Suisse First Boston Limited**  
Agent Bank

**U.S. \$450,000,000**

**Queensland Coal Finance Limited**  
(Incorporated under the Laws of the State of Victoria)

**Guaranteed Floating Rate Notes Due 1996**

Unconditionally guaranteed as to payment of principal and interest by

**The Bank of Tokyo, Ltd.**

of which U.S. \$355,000,000 is being issued as the Initial Tranche

In accordance with the provisions of the Notes, notice is hereby given that for the six month interest period from 9th May, 1984 to 9th November, 1984 the Notes will carry an interest rate of 11 1/4% per annum. The interest amount payable on the relevant interest payment date which will be 9th November, 1984 is U.S. \$394.17 for each Note of U.S. \$10,000.

**Credit Suisse First Boston Limited**  
Agent Bank

**U.S. \$20,000,000**

**DnC**  
Den norske Creditbank

**Floating Rate Subordinated Capital Notes**  
Due 1990

In accordance with the provisions of the Notes, notice is hereby given that for the three month interest period from 9th May, 1984 to 9th August, 1984 the Notes will carry an interest rate of 11 1/4% per annum and the Coupon Amount per U.S. \$1,000 will be U.S. \$29.07.

**Credit Suisse First Boston Limited**  
Agent Bank

**U.S. \$40,000,000**

**Christiania Bank og Kreditkasse**  
(Incorporated in the Kingdom of Norway with limited liability)

**Floating Rate Subordinated Capital Notes Due 1991**

In accordance with the provisions of the Notes, notice is hereby given that for the three month interest period from 9th May, 1984 to 9th August, 1984 the Notes will carry an interest rate of 11 1/4% per annum and the Coupon Amount per U.S. \$1,000 will be U.S. \$29.07.

**Credit Suisse First Boston Limited**  
Agent Bank

These securities have been sold outside the United States of America and Japan. This announcement appears as a matter of record only.

8th May, 1984

**NEW ISSUE**

**FIWCC**

**FUJIKURA LTD.**  
(Fujikura Densen Kabushiki Kaisha)

**U.S. \$30,000,000**

**7 1/4 per cent. Guaranteed Bonds due 1989**

with

**Warrants**

to subscribe for shares of common stock of Fujikura Ltd.

The Bonds will be unconditionally and irrevocably guaranteed by

**The Mitsui Bank, Limited**

Issue Price 100 per cent.

**Nomura International Limited**

**Amro International Limited**                      **Banque Indosuez**

**Deutsche Girozentrale -Deutsche Kommunalbank-**      **IBJ International Limited**

**Kleinwort, Benson Limited**                      **Kokusai Securities Co., Ltd.**

**Kuwait International Investment Co. s.a.k.**                      **Manufacturers Hanover Limited**

**Mitsui Finance International Limited**                      **Mitsui Trust Bank (Europe) S.A.**

**Samuel Montagu & Co. Limited**                      **Société Générale**

**Union Bank of Switzerland (Securities) Limited**                      **Yamaichi International (Europe) Limited**

**NORDIC INTERNATIONAL FINANCE B.V.**  
U.S. \$40,000,000

**Guaranteed Floating Rate Notes 1991**

Guaranteed on a subordinated basis as to payment of principal and interest by

**NORDIC BANK PLC**

For the six months

9th May, 1984 to 9th November, 1984

the Notes will carry an interest rate of 11 1/4% per annum with a Coupon Amount of U.S. \$29.07 per U.S. \$1,000 Note, payable on 9th November, 1984

**Bankers Trust Company, London**  
Principal Paying Agent

**NACIONAL FINANCIERA, S.A.**  
US\$150,000,000 Floating Rate Notes due 1990

For the six months

8th May 1984 to 8th November, 1984

the Notes will carry an interest rate of 11 1/4% per annum and

Coupon Amount of US\$597.36.

The relevant interest payment date will be 8th November 1984

By: **Bankers Trust Company, London**  
Reference Agent



UK COMPANY NEWS

Jefferson Smurfit down by 10% in 'lacklustre year'

SALES OF Jefferson Smurfit, the Dublin based international packaging, print and distribution group rose by 37 per cent to £168.9m in the year ended January 31 1984 but pre-tax profits emerged nearly 10 per cent lower at £12.53m, after a sharp increase in interest charges.

In what the directors describe as a "difficult and lacklustre year" the UK showed a turnaround from losses (before interest and tax) of £2.9m to profits of £28,000 in the U.S. profits moved up from £18.1m to £18.5m on sales £283m higher at £484m reflecting the full acquisition of Smurfit Diamond Packaging. At this level sales now represent 71 per cent of the group total.

Business in Ireland continued to be very difficult and profits here were marginally lower at £4.52m (£4.65m). The directors explain that cost cutting and retrenchment were the order of the day in 1983.

£17.74m (£16.3m). Earnings per 25p share amounted to 12.6p (£12.3p). The tax credit reflects an exceptional credit of £3m arising from the claw back of U.S. deferred tax.

Referring to the dividend the directors say that provisions have been made for the payment of dividends to shareholders on the basis of the same total cost to the group as for 1983-84.

Jefferson Smurfit has put the troubles of the last couple of years behind it by expanding rapidly in the U.S. With £107m cash and a ratio of net debt to equity of 38 per cent it is well placed to take up further opportunities. The U.S. still looks the most attractive area for development. In Ireland the company is grateful that things have at least not worsened. The UK's modest improvements in demand are being eroded by imports.

Keeping ahead of the game in search for investments

FINANCIAL institutions in the City of London are by now well used to fund raising visits from an unwillingness to join the ranks of U.S. venture capitalists already chasing U.S. pension funds for a share of their assets. But he points out, "Because we have no U.S. clients we can't run away if things go wrong. We are very much committed to our international clients."

Berkeley is an avowed development capital (rather than venture capital) enthusiast and this is reflected in the aims of the new company. "The trouble with being venture capitalist is conscious pursuit of European institutions was inspired partly by an unwillingness to join the ranks of U.S. venture capitalists already chasing U.S. pension funds for a share of their assets. But he points out, "Because we have no U.S. clients we can't run away if things go wrong. We are very much committed to our international clients."

The new company (to be chaired by the Marquess of Tavistock) will be incorporated in Jersey and is a wholly owned subsidiary of Touche Remnant Holdings, the UK investment manager best known for its investment trusts and responsible overall for more than £2bn of assets. The UK participation, however, is the California based Berkeley Consulting Group which is expected to be the main source of opportunities and which will choose and monitor the fund's investments on the West Coast of America.

Founded by Mr Arthur Truoger in 1977, Berkeley has specialised in introducing a number of UK institutional investors to the excitement of fast growing high technology businesses in California. Since early 1981 the group has arranged more than \$170m of development capital for its 15 European clients—among them Touche Remnant, Schroders and Murray Johnstone—and claims that nine of the 33 companies involved have either achieved a quotation or been sold to a third party. Truoger admits that his

shareholders vote otherwise will distribute its assets in mid 1989. Truoger dismisses suggestions that later stage deals have too often been overpriced though he concedes that some U.S. investment banks have got "sloughered" in the recent bear market. "The trick is to find companies before others do, before they get too widely publicised and too fancy a price. Five of our staff concentrate exclusively on seeking out and cultivating potential investments."

As for the bear market Truoger is unperturbed. "We have bought companies at the top of the bull market like 3Com and Integrated Device Technology and still done well. The true test of any investment manager is his ability to perform at any time of the investment cycle, not just when things are in his favour."

**Tim Dickson looks at the emergence of a new development capital company**

Recovery continues at J. Crowther—pays 1p

DESPITE A loss of £56,000 at Rayon and Allied Fibres, since closed, John Crowther Group, woolen textile manufacturer, has continued its strong recovery and turned in taxable profits of £227,000 for the 1983 year, against £46,000. The company has also returned to the dividend list with a 1p payment, as forecast.

Mr Trevor Barker, chairman, says that with the better forward order position and business, and with the improvement in operations, he is confident of increased profits in 1984.

At the midway stage, losses had been reduced from £114,000 to £38,000, and directors said that the completion of the rationalisation programme will bring benefits in 1983 including the release of more property for sale and lease. They were optimistic of a profitable year.

expanded from £5.61m to £7.33m and operating profits amounted to £423,000, compared with £271,000. Bank interest took £196,000 (£225,000).

After tax, £35,000 (£3,000 credit), and extraordinary debits of £141,000 (nil), the available profit came through little changed at £51,000 (£48,000). Earnings per 25p share were 5.1p (0.9p) on capital increased by last June's rights issue.

The only aspect of yesterday's full-year figures from John Crowther that had the market wrong footed was the losses, both above and below the line, from recycling "ICI" and "Countrols" waste. But for that the company would have easily made the £300,000 profit that the City was expecting. Short-term figures apart, the real point is that Mr Trevor Barker is pulling together a solid textile company out of the mess that he inherited. A rights issue last summer, injecting £280,000, has eased the debt problem and the company expects borrowings to halve again this year to between £400,000 and £500,000. Production has moved from 18,000 pieces of cloth in 1982 to 24,000 last year and in-house budgets of 30,000 for 1984 are already being left behind.

Midland Marts unchanged

VIRTUALLY unchanged full year pre-tax profits of £222,000, against £224,000, were achieved by Midland Marts Group, a USM quoted company which deals in livestock, agricultural property and computer software.

Associate company profits amounted to £3,000 (nil). The dividend total is being held at 4p net per 25p share by an unchanged final payment of £288,000 (£281,000), earnings per share are shown as 7.5p (8.1p). There was an extraordinary provision of £100,000 for deferred tax, which has been transferred from reserves.

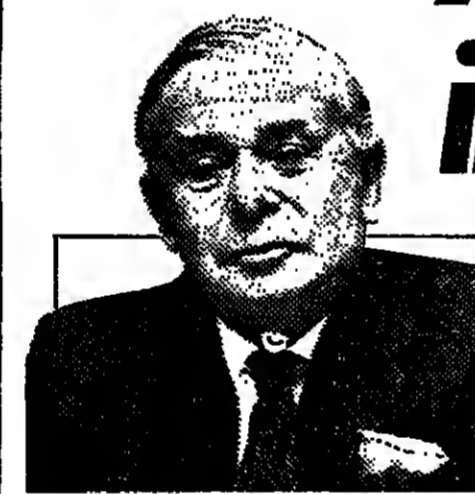
**BASE LENDING RATES**

|                         |        |                          |        |
|-------------------------|--------|--------------------------|--------|
| A.B.N. Bank             | 8 1/2% | Hill Samuel              | 8 1/2% |
| Allied Irish Bank       | 8 1/2% | C. Hoare & Co.           | 8 1/2% |
| Amro Bank               | 8 1/2% | Hongkong & Shanghai      | 8 1/2% |
| Henry Aschbacher        | 8 1/2% | Citigroup Ltd.           | 10%    |
| Armedo Trust Ltd.       | 8 1/2% | Knawley & Co. Ltd.       | 8 1/2% |
| Associated Cap. Corp.   | 9%     | Lloyds Bank              | 8 1/2% |
| Banco de Bilbao         | 8 1/2% | Malindi Ltd              | 8 1/2% |
| Bank Hapoalim BM        | 8 1/2% | Edward Manasse & Co.     | 9 1/2% |
| Bank of Ireland         | 8 1/2% | Meghill and Sons Ltd.    | 8 1/2% |
| Bank of Cyprus          | 8 1/2% | Midland Bank             | 8 1/2% |
| Bank of India           | 8 1/2% | Morgan Grenfell          | 8 1/2% |
| Bank of Scotland        | 8 1/2% | National Bk. of Kuwait   | 8 1/2% |
| Barclays Bank           | 8 1/2% | National Girobank        | 8 1/2% |
| Barque Belge Ltd.       | 8 1/2% | National Westminster     | 8 1/2% |
| Bearley Bank            | 8 1/2% | Norwich Gen. Tst.        | 8 1/2% |
| Benefield Trust Ltd.    | 8 1/2% | People's Tst. & Sv. Ltd. | 8 1/2% |
| Bremar Holdings Ltd.    | 8 1/2% | R. Rapson & Sons         | 8 1/2% |
| Brit. Bank of Mid. East | 8 1/2% | F. S. Reison & Co.       | 8 1/2% |
| Brown Shipley           | 8 1/2% | Roseburys Guarant.       | 8 1/2% |
| CL Bank Nederland       | 8 1/2% | Royal Trust Co. Canada   | 8 1/2% |
| Canada Perm. Trust      | 8 1/2% | J. Henry Schroder Wage   | 8 1/2% |
| Castle Court Trust Ltd. | 8 1/2% | Standard Chartered       | 8 1/2% |
| Cayan Ltd.              | 8 1/2% | Trade Dev. Bank          | 8 1/2% |
| Cedar Holdings          | 8 1/2% | TCB                      | 8 1/2% |
| Charterhouse Japbet.    | 8 1/2% | Trustee Sav. Bank        | 8 1/2% |
| Choularton              | 8 1/2% | United Bank of Kuwait    | 8 1/2% |
| Citibank Savings        | 8 1/2% | United Mizrahi Bank      | 8 1/2% |
| Credentiale Bank        | 8 1/2% | Volkskas Limited         | 8 1/2% |
| C. E. Coates            | 8 1/2% | Westpac Banking Corp.    | 8 1/2% |
| Comm. Bk. of N. East    | 8 1/2% | Whiteway Ltd             | 8 1/2% |
| Consolidated Credits    | 8 1/2% | Williams & Glyn's        | 8 1/2% |
| Co-operative Bank       | 8 1/2% | Wintrust Secs. Ltd.      | 8 1/2% |
| The Cyprus Popular Bk.  | 8 1/2% | Yorkshire Bank           | 8 1/2% |
| Dunbar & Co. Ltd.       | 8 1/2% |                          |        |
| Duncker Lawrie          | 8 1/2% |                          |        |
| E. T. Trust             | 8 1/2% |                          |        |
| Exeter Trust Ltd.       | 8 1/2% |                          |        |
| First Nat. Fin. Corp.   | 8 1/2% |                          |        |
| First Nat. Secs. Ltd.   | 8 1/2% |                          |        |
| Robert Frazer           | 8 1/2% |                          |        |
| Grindlays Bank          | 8 1/2% |                          |        |
| Guinness Mahon          | 8 1/2% |                          |        |
| Hambros Bank            | 8 1/2% |                          |        |
| Heritable & Gen. Trust  | 8 1/2% |                          |        |



RUGBY CEMENT

Another year of improved results



Lord Boyd-Carpenter

- Substantial improvement in efficiency of U.K. cement operations.
- Growing importance of overseas activities.
- 11th year of dividend increase.

From the Chairman's Statement

A day or two before the Annual General Meeting I shall celebrate my 76th birthday and I shall be relinquishing the Chairmanship at the end of the Meeting on 8th June. Although I am not conscious of any diminution in my capacity for work, I think this is an appropriate time for a change. And I am reinforced in this view by the availability of the present Managing Director, Mr. Maurice Jenkins, to succeed me as Chairman. He has served the Company for over 21 years, and probably knows more about the cement industry and its problems than any living man.

From the Directors' Report

**Cement (United Kingdom)**  
The tonnage sold during the year was just over 4% higher than in 1982, an outcome materially influenced by the marked improvement in the number of housing starts in the private sector, the highest for ten years. Apart from private housing, construction activities continued at a low level. Although imports took only some 1% of the market in Great Britain, the situation is closely watched.

There were modest improvements in output and efficiency in production. Further increases in operational efficiency are expected in 1984 and 1985 in terms of kiln fuel, electricity, repair costs and particularly in the more effective use of manpower.

The building of industrial/warehousing units on the surplus part of the old Lewes Works site has been completed since the end of the year. Some of the units are now occupied by tenants.

**Reinforcement and associated products**  
With markets very depressed a comprehensive review of the business was undertaken and a programme of redundancies was implemented amongst factory and office employees. Operating costs have been significantly reduced and the trading position should improve substantially in 1984.

During the year Rom River Plastics Limited disposed of its interest in Langstone Plastics Limited, a manufacturer of reprocessed thermoplastic compounds.

**Cement and lime (Australia)**  
The market for cement in Western Australia remained seriously depressed for most of the year until the last quarter, when there was an encouraging upturn in the housing industry. It is expected that this sector improvement will continue in 1984. Sales of quicklime were well maintained throughout the year with total

It is also to be remembered that our activities overseas are becoming increasingly important to our Group. As well as our continuing consultancy work we now have in addition to our substantial Australian interests, an interest in three American cement-making companies all of which will of course benefit from the recoveries in their respective countries and bring with them the advantages of geographical diversification.

Once again our great asset has been loyalty, reliability and hard work of those who work for the Group at all levels. We are still one of the very few major companies in this country in which the overwhelming majority of our U.K. employees are also shareholders. My final word is one of sincere gratitude. To all my colleagues on the Board, to Management, to Sales Staff, to those at the Works and Transport, and to all who work for the Group at home and overseas I send my grateful thanks.

**SALIENT FIGURES**

|   | 1983<br>£'000  | 1982<br>£'000  |
|---|----------------|----------------|
| Turnover                                      |                |                |
| United Kingdom                                | 138,587        | 135,521        |
| Overseas                                      | 29,406         | 30,186         |
|   | <b>167,993</b> | <b>165,707</b> |
| Trading profit                                |                |                |
| United Kingdom                                | 16,864         | 16,639         |
| Overseas                                      | 5,988          | 5,915          |
|   | <b>22,853</b>  | <b>22,554</b>  |
| Net interest and investment income            | 335            | 713            |
| Related companies                             | 992            | 286            |
| Profit on ordinary activities before taxation | <b>24,180</b>  | <b>23,553</b>  |
| Taxation                                      | 7,248          | 7,888          |
| Profit after taxation                         | <b>16,932</b>  | <b>15,665</b>  |
| Earnings per share                            | 13.8p          | 12.9p          |
| Total Dividend per share                      | 5.8p           | 5.5p           |

demand in excess of 1982's tonnage, reflecting a general improvement in the alumina and gold mining industries. A further increase in the demand for lime is expected during the current year.

Towards the end of 1983 agreement was reached with the Western Australian State Government for residential use of surplus land overlooking Cockburn Sound. Due to delays in obtaining the release of titles no sales were made during 1983. However, since the end of the year nearly all the 80 lots in the first stage have been sold.

**Hotel (Australia)**  
A year of good growth; the prospects for 1984 indicate a more modest performance.

**Related companies (U.S.A.)**  
In June a one-third share in RC Cement Co., Inc. was acquired. Through a wholly-owned subsidiary, River Cement Company, it operates a 1.15 million tons cement plant at Selma, Missouri, close to St. Louis, and a grinding plant at Orange, Texas.

The total demand for cement in the U.S.A. in 1983 showed a general, if somewhat patchy, upturn in which the three related companies participated with increased sales. However, competition remained extremely keen and cement prices generally failed to respond to the improvement in consumption. Further increase in demand and some improvement in cement prices are looked for in 1984.

The salient figures are an abridged version of the Company's accounts which received an unqualified auditors' report and will be filed with the Registrar of Companies.  
Copies of the Report and Accounts containing the full speech by the Chairman can be obtained from the Secretary, The Rugby Portland Cement P.L.C., Crown House, Rugby.



UK COMPANY NEWS

**Akroyd & Smithers down 18% so far**

PROFIT BEFORE tax at Akroyd & Smithers, stockjobber, declined 17.7 per cent to £7.76m for the 25 week period ended March 23, against £9.36m for the comparable 27 week period. In the last full year, the company reported taxable profit of £16.01m. Current profitability is "reasonably satisfactory," states the board. There will be an unchanged interim dividend of 4p. Last year's total stood at 16.5p. Tax took a smaller slice at £3.39m against £4.72m, to leave attributable profit down from £4.66m to £4.37m. There were no minority deductions this time, against a comparable £47,000. The dividend absorbed £933,000, against £849,000, and the company retained £3.44m, down from £4.02m. Earnings per share, on a time weighted average of the number of shares in issue, were down from 29.1p to 21.5p. The directors have agreed in principle to introduce an executive share option scheme, to be submitted for shareholders' approval at an AGM. In the course of the period, Akroyd, one of the largest stockjobbers on the London Stock Exchange, was involved in two major deals. In January, they announced the formation in partnership with Rowe & Pitman, stockbrokers, of an international equity trading subsidiary. Mercury Securities, the parent company of S. G. Warburg, merchant bank, acquired a 29.9 per cent stake in Akroyd.

**Arenson cuts mid-way loss to £204,000**

Figures for the six months to January 29 at Arenson Group, manufacturer of domestic and office furniture and equipment, showed some improvement with the loss before tax down by £200,000 to £204,000. The chairman states that the results were in line with the group's budgets. First half figures, which contain all the work's holidays, are not representative of the full year, for which he confidently expects a return to profit. Turnover was down from £7.7m to £6.8m, reflecting the discontinuation of certain of the group's activities. Sharply lower financing charges, £291,000 against £386,000, and gains from operating profit of £87,000, against £102,000. The company paid no tax (£15,000), due to the availability of tax losses and allowances. The absence of extraordinary items this time (£250,000 debits) resulted in overall improvement of £385,000 in the half year result. Losses per share were down from 3.4p to 2p.

**BHS aims to quicken growth rate**

A NEAR 12.5 per cent increase in trading profit from sales, including VAT, 8.8 per cent higher has been achieved by British Home Stores in the year ended March 31 1984. At the pre-tax level, the profit rose 12.9 per cent, from £48.87m to £55.19m. But the group needs faster improvements in productivity and profitability, and its strategy will be to seek to associate its brand name and image with "consistently superior products offering the best possible value for money," backed up by a major refurbishment programme covering the whole chain of stores. Turnover was up from £902.75m to £948.36m, with merchandise rising 10.3 per cent to £944.76m, food improving 2.4 per cent to £90.82m, and restaurants moving up 5.8 per cent to £50.42m. Trading profit was £48.06m (£42.78m) and to this was added share of related companies £4.99m (£4m), interest receivable £3.44m (£4.73m) and deducted interest payable £2.62m (£3.64m). Earnings are 16.4p (13.2p) per share and the final dividend is 4.5p for a total of 6p, compared with 5.25p. Sir Maurice Hodgson, chairman, says the group's market

share has not been increasing fast enough at a time when important changes have been taking place in the High Street. The new objectives are essentially long term but it is hoped that first results will be evident next spring. BHS is now committed to rebuilding a successful food business. Implementation of the marketing policy began in January and sales have shown a "dramatic improvement," with all stores showing increases over last year. Food figures prominently in store refurbishment, but the product is the key element, says Sir Maurice. Developments in product range will be supported by the extension of food to additional stores—in the current year food halls will be included in Cheltenham, Carlisle and Canterbury, and food will be re-introduced in major refurbishments in Leeds and Hull. Last year's refurbishment programme, initiated in November 1982, is further development of the design concepts built into the Harlow (Essex) store which opened in November 1982. Six stores were the subject of major refurbishments last year and all have food departments which were given the new "food ball"

**HIGHLIGHTS**

Lax looks at the full year figures from Costain showing profits of £46.4m and poses the question of whether the group can move far enough away from contracting to change the group's image in the City. The column then moves on to examine the figures from British Home Stores where profits growth to £55m was below the sector average, against which the column also looks at the banking figures for April which show a surprising small growth in Sterling M3. The question now is whether the rise is small enough to stop the clearing banks raising their base rates, especially in the light of three month interbank rate standing at 9 1/2 per cent. Finally the column looks at the half time figures from Akroyd & Smithers.

image. They were selected to cover a range of different characteristics. In its biggest-ever development programme, the group this year will have 26 stores under major refurbishment, although not all of them will be completed during the trading year. In addition new stores will open in Ayr, Cheltenham, Carlisle and Canterbury. Spending of about £60m is planned for this year and this level is likely to be maintained in future. In addition to the planned refurbishment of the

**Garnar Booth rises to record £3.2m**

TAXABLE PROFITS at Garnar Booth, tanner and leather manufacturer, rose by nearly three-fold in the year to January 31 from £1.12m to a record £3.18m. Commenting on "an outstanding year of achievement," Sir Kenneth Newton, the chairman, states that the positive trends of last year are continuing and the demand for leather remains strong. The company is proposing an increased final dividend of 4.85p, against 4.25p, to lift the total by nearly 13 per cent from 6.65p to 7.5p. This compares with the not less than 4.65p final forecast at the time of last September's rights issue. The company received no income from investments, against £33,000, and paid £1.14m (£1.22m) net in interest. The tax charge for the year was £786,000 (credit £7,000), and provisions for deferred tax and closure expenses produced an extraordinary debit of £335,000 (£227,000). The group's factories continue to be busy, and the chairman says that it should have another successful year. Shareholders' funds increased by £2.9m to £14.2m by the year end and net current assets amounted to £10.3m (£4.5m). Short-term bank borrowing has been reduced from £5m to £3.2m, and during the year medium-term loans of £2.5m were arranged with the group's bankers. Of these, all being unsecured, £0.5m is repayable within one year, the balance within five years from August 1983.

whole chain, the management will be introducing more food halls, converting more restaurants to the new "Country Table" style, and increasing the number of stores. After tax £21.18m (£21.71m) and extraordinary debits £2.73m, including £3.6m deferred tax provision followed the proposed changes in first year allowances, the net profit comes out at £31.25m (£27.16m), and the £1.24m absorbed £12.44m (£10.94m). See Lex

**Process plant helps Simon Engineering advance to £21.7m**

THERE WERE no "dramatic changes" in demand in 1983 for the goods and services provided by Simon Engineering, and most group companies continued to find trading conditions difficult. However, despite this and lower interest receivable and related companies profit, the group managed to achieve higher taxable profits of £21.7m, compared with £20.66m. The bulk of the profits increase was attributable to process plant contracting, which contributed £1.2m more at £5.41m. Elsewhere, manufacturing earned £3.82m, against £3.79m, and oil services lifted profits from £376,000 to £1.15m. There was a decline in merchandising and storage to £5.08m, compared with £5.17m, but food engineering requirements and improved cash flow. The only surprise is the decision to lift the bullet at Allen and Garcia and the UK poultry subsidiary—with its consequent heavy provisions. As far as prospects are concerned the outlook for growth is patchy and still uncertain. However, the current work load suggests that food engineering will lead the way until the process plant cycle takes off again. But the main spark to growth will come from Drake—possibly £3.7m this year—and any new acquisitions. On this basis £26.5m looks possible for 1984. At this level the 42p shares, down 20p, are selling on an undemanding prospective p/e of around 7 (30 per cent tax charge).

The figures include a year-on-year contribution from Drake and Scull, which was acquired in September. **comment** Simon's latest results highlight once again the company's considerable survival instincts. Against the background of very difficult trading conditions underlying profits have been held at 1982 levels, with a three-month contribution from the new Drake and Scull acquisition providing a near £1m sweetener. Alongside this Simon has already managed to go almost halfway to rebuilding its otherwise strong balance sheet after the £12m cash outlay for Drake, thanks to a reduction in working capital requirements and improved cash flow. The only surprise is the decision to lift the bullet at Allen and Garcia and the UK poultry subsidiary—with its consequent heavy provisions. As far as prospects are concerned the outlook for growth is patchy and still uncertain. However, the current work load suggests that food engineering will lead the way until the process plant cycle takes off again. But the main spark to growth will come from Drake—possibly £3.7m this year—and any new acquisitions. On this basis £26.5m looks possible for 1984. At this level the 42p shares, down 20p, are selling on an undemanding prospective p/e of around 7 (30 per cent tax charge).

**Second half boost lifts Costain to £46.4m**

SECOND HALF profits of Costain building contracting, housing, mining group, surged from £18.06m to £30.19m and boosted the full 1983 figure from £11.41m (£4.75m loss), mining £11.96m profit (£10.59m); property £7.25m (£7.39m). After tax, £10.99m (£6.44m), minority interests £3.82m (£7.17m), and extraordinary credits, less tax, of £4.48m (£1.9m), the attributable balance came through ahead from £28.71m to £34.12m. Earnings per 25p share are given as 42.6p, compared with 38.6p, and the dividend is lifted to 13.5p (12p) with a final 6p. Mr Terrel Wyatt, chairman, said later that the pattern of last year's results was continuing

with "considerable confidence." A breakdown of pre-tax profits by principal activity shows: contracting £25.8m (£27.49m); housing £1.41m (£4.75m loss); mining £11.96m profit (£10.59m); property £7.25m (£7.39m). After tax, £10.99m (£6.44m), minority interests £3.82m (£7.17m), and extraordinary credits, less tax, of £4.48m (£1.9m), the attributable balance came through ahead from £28.71m to £34.12m. Earnings per 25p share are given as 42.6p, compared with 38.6p, and the dividend is lifted to 13.5p (12p) with a final 6p. Mr Terrel Wyatt, chairman, said later that the pattern of last year's results was continuing

with "some fairly strong plus indications coming out of housing and mining." He added that the group expected to see a continued and growing contribution from its housing operations and continuing growth in both mining and property. Spot housing turned round from a small loss to a small profit, the number of units completed rising from 494 to 777. U.S. housing completions at 690 were down from 1982 but have moved up strongly in the 1984 first quarter. Group cash balances stood at £100m at the year end, of which £23m had been used on acquisitions in the first three months.

Mr Wyatt said that further funds were also needed for the build up in volume on the housing operations and mining. He disclosed that an announcement would be made within two weeks regarding a further investment in U.S. coal interests, which will be funded out of the group's existing American operations. The chairman added that the group had realised a "fair and useful figure in relation to the work involved" with the Thames Barrier—it has a 35 per cent share in the consortium that handles the project which was formerly opened yesterday by the Queen. See Lex

**Richards hopes to restore payout as upturn continues**

THE DIRECTORS of Richards, a spinner of high technology yarns, hope to restore the current dividend to its former level of 1.45p per share. They report that the recovery in Richards' performance continued in the first six months to end-March 1984 with taxable losses of £104,000 turned into profits of £208,000. The profit follows a return to the black in the second half of 1983-84 which enabled the group to show a surplus of £26,000 for the full year, compared with a £327,000 deficit. Prior to that the company had incurred losses for three consecutive six month trading periods and the dividend was cut from an annual total of 1.45p to 0.8p

The directors now hope to restore the dividend to the 1.45p level on the back of an expected continued recovery in the second half. The reduce disparity they have declared a higher interim payment of 0.5p (0.3p). The profit for the first half under review was £104,000 on turnover nearly £2m higher at £5.22m. Knitwear yarn operation have shown a marked improvement in performance and, the directors point out, are beginning to make a satisfactory contribution to group profits. After tax of £99,000 (credit £80,000) there was a net profit of £109,000 (loss £45,000) and earnings per share amounted to 1.45p (loss 0.39p).

**Welpac 8% over forecast with profits at £271,000**

HIGHER THAN forecast profits have been announced by newcomer Welpac, which sells pre-packed and DIY products through multiple retailers and stores. Against a prospectus forecast of not less than £250,000, the company achieved record taxable profits of £270,970 for the year to end-January 1984. There are no comparable figures. The acquisition of Welpac Hardware on January 3 1984 brought about a change in the company's year end and in name from Kafur Development Company to Welpac. In the 12 months to June 30 1983, Kafur incurred a taxable loss of £268,700. Two of the group's product outlets are Texas Homecare and B & Q Retail stores. The profit for the year under review was £270,970, a 100 per cent increase on the £145,387, and after extraordinary items, being acquisition and USM placing costs, there is a profit of £271,000. However, after deducting pre-acquisition profits of the subsidiary purchased of £130,133 there was a attributable loss of £268,700. As previously stated there is

no dividend hut after eliminating the losses that have accumulated in Welpac, the directors expect to recommend a directors' 0.2p for the current year. **comment** Welpac has beaten its profits forecast by an 8 per cent margin but in an inactive market its price was unchanged at 48p, where the company is valued at £3m. Direct comparisons with the previous period are clouded by a change in the year end and the fact that Welpac Hardware has not been included for the full year. It looks as if volumes have risen in line with the DIY industry's growth, which has allowed Welpac to add 400 units to its 1,400 it had under its belt at its USM debut in January. Welpac is supplementing its dependence on commodity items by expanding into higher priced products, so that the top end of its range has been pushed up from £1.50 to £2.7. That is good for margins and gives Welpac a foothold in a market which should be in a steady state. 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BIDS AND DEALS

UK COMPANY NEWS

**Hanson wins bid battle for U.S. Industries**

Hanson Trust, an industrial group, yesterday announced that it had gained control of U.S. Industries, a Connecticut-based manufacturing group, after a fiercely contested takeover battle.

Hanson revealed that the majority of U.S. Industries' shareholders had decided to tender the shares for \$22.33 in a deal which values U.S. Industries at \$331m (£333.8m).

Sir Gordon White, chairman of Hanson Trust's U.S. operations, said that over 92 per cent (fully diluted) and 77.8 per cent (fully diluted) of U.S. Industries' issued and outstanding common shares had been tendered to HMAO Industries Inc, Hanson's tendering company by midnight on May 7.

He added that HMAO Industries had extended its tender offer to May 11 to allow shareholders additional time to tender their shares.

Sir Gordon said that with the addition of U.S. Industries sales by Hanson's American subsidiaries would have totalled in excess of \$2.5bn in 1983.

He added that he welcomed the U.S. Industries companies to the Hanson group and looked forward to working with U.S. Industries management to maximize profit in the future.

U.S. Industries has a wide range of activities involved in consumer products, building products and industrial products. "These activities nicely complement Hanson's existing interests," Sir Gordon said.

Hanson's victory follows a five week battle for control of U.S. Industries. Last Friday, U.S. Industries told its shareholders to tender their shares. Its directors said that they intended to tender their own shares—representing 5 per cent of the shares. A proposed leveraged buyout by management and other shareholders at \$24.50 a share had failed because of lack of financial support.

**Greenfield family sells 26% stake to consortium**

BY ALEXANDER NICOLL

Greenfields Leisure, leisurewear and camping equipment group, said yesterday that a consortium of investors had acquired the Greenfield family's 26.7 per cent stake in the company and that a merger was planned with Blacks Camping and Leisure, whose chairman is the consortium's leader.

Among other members of the consortium is Coparo Properties, the property arm of Mr Swraj Paul's Caparo Group, Caparo, which previously held 150,000 Greenfield shares, has bought 1m more, bringing its total holding to 10.5 per cent.

Caparo already owns 20 per cent of Blacks Camping, which was sold last November by the Black and Edgington subsidiary of Mr Michael Ascroft's Hawley

Group. The buyer, who paid £5m, was a private company headed by Mr Murdoch Morrison. Mr Morrison became chairman of Blacks Camping and will now become chairman of Greenfields.

Mr David Greenfield, the current Greenfields chairman, gave no reason for the family's decision to sell their holdings in the company. He and his family sold 1.8m shares, deputy chairman Mr John Greenfield and his family sold 751,342, and Miss Marilyn Greenfield, who is not a director, sold 810,352.

Their combined holding of 2.7m shares, or 25.7 per cent, was sold at 49½p each, bringing them £1.38m. The sale valued the whole company at £5.34m. Yesterday, Greenfields shares rose 11½ to 49½.

Greenfields reported a pre-tax

loss of £153,000 in the year ended October 31 1983, compared with a £336,000 profit in the previous year, with turnover falling to £19.23m against £21.47m. The company blamed the recession, an abnormally wet spring and the late arrival of good summer weather. Since then, it has attempted to build a broader product range with the purchase of East Midlands Wholesale Chemist Supplies and Rock Bottom Discount Stores.

Greenfields and Blacks Camping gave no details of the terms or timing of their planned merger proposals, but said the intention was to create a "strong force" within the leisure industry.

Blacks Camping operates 25 retail shops around the UK.

**Dowty Group boosts electronics growth with £13.5m buy**

BY ALEXANDER NICOLL

Dowty Group, the Cheltenham-based aerospace, defence and mining equipment group, said yesterday it had agreed to buy the ordinary share capital of Gresham Loan, an unquoted electronics company, for £13.5m. Sellers would have the option of subscribing to new Dowty shares.

The purchase would fuel Dowty's already rapid growth in the electronics field. Gresham specialises in submarine torpedo fire control systems, computer graphics, display terminals and advanced power supplies.

Gresham shareholders, predominantly its directors, will be able to receive new Dowty shares at a price equal to the average of middle market quotations on the three business days ended yesterday. Dowty said Thursday's reference price was 138p, and Friday's was 137p. Yesterday, Dowty shares fell 6p to 131p.

At that price, the average would be 135p. Dowty has agreed to pay the equivalent of £15 for each of Gresham's 900,000 shares, so if all Gresham shareholders took up the share option Dowty would issue 10m new shares compared with the 202.2m currently outstanding.

Gresham also has 600,000 11.25 per cent preference shares outstanding. Dowty said no immediate offer was being made for them, but that its agreement with Gresham was expected to lead to the acquisition of the whole of its issued capital. Holders of 83.79 per cent of the ordinary shares have undertaken to accept Dowty's offer.

Gresham had net assets of £5.75m at the end of its financial year to October 1, 1983. In that year, it had pre-tax profits of £1.7m on turnover of over £18m.

**Hugin advances to over £2m**

Hugin, the former cash register subsidiary of Electrolux which was bought out by its management last December, made a pre-tax profit of £2.07m for 1983, its first report and accounts disclose. This is bang in line with the forecast of not less than £2m and was achieved on a turnover of £29.76m.

The buyout was funded by a placing of Hugin shares with over 30 British institutions and with the backing of Hugin employees and management who retained a 16.5 per cent stake in the company.

The results show a 54 per cent profit improvement over the £1.34m generated in 1982 and the directors are looking for a significant increase in profit in 1984, as stated in the prospectus.

At December 31, 1983, orders in hand for delivery in 1984 were 83 per cent higher than at the same time in 1982. The company intends to seek a listing at an appropriate time in the current year.

Hugin's main business is the design and marketing of electronic retail point-of-sale equipment and systems. It distributes these worldwide through a network of 10 wholly-owned marketing subsidiaries and distributors in a further 50 countries.

The group performed satisfactorily in all its international markets. The subsidiary in the UK has continued its record of profitability and has further expanded its market share with some notable large installations during the course of 1983.

**Reed agrees £20m for offshoot**

London & Continental Advertising Holdings yesterday revealed details of its agreed bid worth up to £20m for London & Provincial Poster Group, a company several times its size.

LCA is planning to finance the purchase of LPP from Reed International via an offer for sale of 13.38m new 20p shares at 120p each, which will raise around £14.65m net of expenses. The offer is financed from additional medium-term bank loans.

When LCA asked for its shares to be suspended from the USM in March pending completion of the deal, the company was valued at £8.6m. It is now applying for a full listing and dealings are expected to open on June 13.

The purchase of LPP, which has 30,000 poster sites in the UK, will give the combined group a more than 20 per cent share of a poster market worth

around £100m. "London & Provincial is the jewel in the crown of outdoor advertising," said Mr John Galfar, LCA's chairman.

LCA is paying £18m in cash for LPP, with a likely additional payment of £2m to cover any increase in LPP's fixed assets between April 3 and completion. It is also proposing to change the par value of its existing 15.7m shares from 5p to 20p. The effect will be to reduce the number of shares presently in issue to 6.3m.

The two groups would have produced combined pre-tax profits of £1.8m last year on a turnover of £22m, nearly seven times LCA's own sales. LCA's net assets will rise from £2.1m to £3.6m or from 33p a share to 87p—following the merger.

LCA's profits have risen steadily over the past five years to £580,000 before tax in the year to last December. LPP's pre-tax profits have declined from £3.9m

in 1982 to £995,000 in the year to April. It was badly hit by the abolition in April 1982 of British Posters, a national sales consortium on which it depended for marketing LCA, on the other hand has always had its own sales net work.

LCA's directors are forecasting a doubled 1.5p net total dividend for the current year, giving a 1.5 per cent yield at the offer price. Of the 13.38m new shares to be issued, 8m shares, or 60 per cent of the total, will be reserved for preferential applications by existing shareholders. A further 1.338m new shares will be reserved for both companies' employees.

Kiewit Benson has underwritten the offer for sale, and the brokers are de Zoete & Bevan. The prospectus will be published on June 1 and applications will open on June 6.

The proposed take-over is not to be referred to the Monopolies and Mergers Commission.

**EuroFerries share plan**

European Ferries, a cross-channel ferry operator, will today announce details of a capital reorganisation which may restrict the fast-growing shareholder perk of cut-price fares.

EF has 167,000 shareholders, most of whom own the minimum 300 shares needed to qualify for the concession. A widespread share ownership is a useful defence mechanism for a company against hostile takeovers but it imposes high administrative costs.

The company declined to comment yesterday, however, on its plans. It is due to announce preliminary results for the year ended December 31 1983 today.

In the first six months of 1983 pre-tax profits rose by £3.9m to £3.9m on virtually unchanged turnover of £119.5m.

Following an EGM the board of Atkins Brothers (Closters) announces that the acquisition of Textile (UK) has been completed by its subsidiary, Atkins Industrial Holdings.

The following mergers are not to be referred to the Monopolies and Mergers Commission: The animal health business of Imperial Chemical Industries and the Wellcome Foundation; proposed acquisition by London and Continental Advertising Holdings of London and Provincial Pester Group.

BIDS AND DEALS IN BRIEF

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available at the time of publication. Dividends are interim or final and the subscription dates below are based mainly on last year's timetable.

**TODAY**

Interim: Associated Paper Industries, Castle (GB), Godwin Warren Control Systems, Marine Adventure Sailing Trust, Trafalgar House.

**Finals:** European Ferries, External Investment Trust, Foster Brothers Clothing, Lee Cooper, Oceana Development Investment Trust.

**FUTURE DATES**

Interim: Crystallite May 14  
Gomine May 24  
Hamilton May 24  
Metasone May 18  
Metasone May 18  
Lyle and Lyle May 18  
Lyle and Lyle May 30  
Finals: Atkins Brothers (Hosiery) June 5  
Gillam (J.) May 11

**Hoechst**  
Hoechst Aktiengesellschaft  
6230 Frankfurt am Main 80

RIGHTS ISSUE 1984

The Board of Management has announced an increase of the share capital to DM.2,526,886,550 by the creation of new Bearer Shares of DM.173,500,000 nominal value, DM.173,125,800 nominal of such new shares has been subscribed by banking consortium and is being offered at a price of DM.140 per share of DM.150 nominal each, to the Company's shareholders, and holders of Option Warrants arising from the Starting 10% Guaranteed Unsecured Loan Stock 1980 of Hoechst Finance plc, London, the 6% U.S. Dollar Loan 1979/83 of Hoechst Finance N.V., Amsterdam, and 8% U.S. Dollar Loan 1983/83 of Hoechst Finance N.V., Amsterdam, on the following basis:

- (a) One new share of DM.50 for every 15 shares of DM.50 nominal.
- (b) One new share of DM.50 in respect of Option Warrants covering the purchase of 15 shares of DM.50, such Bearer Warrants arising from the Starting 10% Guaranteed Unsecured Loan Stock 1980 (issued in registered form) of Hoechst Finance plc, London.
- (c) One new share of DM.50 in respect of Option Warrants covering the purchase of 15 shares of DM.50 arising from the 6% U.S. Dollar Loan 1979/83 of Hoechst Finance N.V., Amsterdam.
- (d) One new share of DM.50 in respect of Option Warrants covering the purchase of 15 shares of DM.50 arising from the 8% U.S. Dollar Loan 1983/83 of Hoechst Finance N.V., Amsterdam.

The new shares (which will rank for dividends declared in respect of the business year 1984 and thereafter will rank pari passu with existing shares) are being offered on the terms of the Company's announcement dated May, 1984. Copies of this announcement, with an English translation thereof, are available on request at the office of the London Paying Agent, S. G. Warburg & Co. Ltd. Application for admission of the new shares to the Official List will be made to the Council of the Stock Exchange.

LONDON DEPOSIT CERTIFICATES

In accordance with the terms of the Certificates, S. G. Warburg & Co. Ltd., as Depositary, will upon the request of holders exercise its rights attached to the deposited shares on the basis of:

One new unit of DM.5 for every 15 units of DM.5 nominal London Deposit Certificates (at DM.14 per unit).

In the absence of such requests, the Depositary will dispose of the rights attaching to the underlying deposited shares and will distribute the net proceeds to the holders of Certificates in proportion to their holdings.

PROCEDURE IN THE UNITED KINGDOM

Holders in the United Kingdom wishing to take up rights must lodge any of the following:

Coupon No. 45 detached from Bearer Share Certificates Receipt C detached from 10% Loan 1980  
Receipt D detached from 6% Loan 1979/83  
Receipt A detached from 8% Loan 1983/83  
London Deposit Certificates for marking Square No. 36

together with the relevant lodgement form during the subscription period from 11th May, 1984 to 22nd May, 1984 inclusive between 10.00 a.m. and 5.00 p.m. on any weekday (Saturdays excepted) at the office of the London Paying Agent:

S. G. WARBURG & CO. LTD.,  
Bond Department,  
St. Alban's House,  
Goldsmith Street,  
London EC2P 2DL. Tel: 01-600 4555 EXT. 6084

Lodgement forms are obtainable from the London Paying Agent.  
Payment must be made in full on application and Temporary Receipts will be issued.  
Holders wishing to make payment in Sterling should agree the applicable rate of exchange and the amount with the London Paying Agent.  
Holders will be advised at a later date when the new Bearer Share Certificates are available to be exchanged for Temporary Receipts.

S. G. WARBURG & CO. LTD.,  
London Paying Agent and Depositary.

9th May, 1984



**COSTAIN**  
increased earnings worldwide

Profit before tax increased to £46.4 million from turnover of £723 million, two thirds of which was overseas. Shareholders' funds increased to £231 million and the dividend to 13.5p per share.

The main activities are contracting, housing, mining and property.

1983 was a year in which Costain nearly doubled the number of homes sold in the United Kingdom, significantly improved results from mining in the United States, restored to profit companies in Australia and Canada, rationalised its scaffolding business and entered into negotiations leading to some valuable acquisitions early in 1984.

| Financial Summary   | 1983   | 1982   |
|---------------------|--------|--------|
| Turnover            | £723m  | £709m  |
| Pre-tax Profit      | £46.4m | £40.4m |
| Earnings per share  | 42.6p  | 38.6p  |
| Dividend per share  | 13.5p  | 12.0p  |
| Shareholders' funds | £231m  | £206m  |

Copies of the 1983 Annual Report will be available from 25 May, 1984 and may be obtained from The Secretary, Costain Group PLC, 111 Westminster Bridge Road, London SE1 7UE (Telephone: 01-928 4977).



Property



MINING NEWS

UK COMPANY NEWS

# CRA hopes for moderate increase in 1984 earnings

BY KENNETH MARSTON, MINING EDITOR

NEVER one to be carried away by false optimism, Sir Roderick Carogge, chairman of the Rio Tinto-Zinc group's Australian arm, CRA, said at yesterday's Melbourne meeting: "We will do well in 1984 if group earnings moderately exceed 1983 levels."

The sharemarket which was—and probably still is—expecting a further useful improvement on last year's earnings of A\$1.46m (547m), following a loss of A\$13.63m in 1982, lowered CRA shares by 10p to 392p yesterday, albeit in a generally unsettled mood.

Sir Roderick admitted that, so far, group earnings are ahead of those of last year, but he pointed out that metal prices (still at "totally unsatisfactory levels") and exchange rates are fluctuating markedly to make forecasting difficult. "Recovery from the deep slump is slow, hesitant and uneven."

He said that negotiations with CRA's Japanese customers over

prices and tonnages for iron ore and coal had resulted in a "disappointing outcome." He was also concerned about the strike at the Broken Hill lead-zinc mines and the close-down of the Fort Pirie smelter.

"Broken Hill is at a watershed. We would like to extend the life of this cradle of Australian underground mining but to do so requires change," he added, pointing out that with the mining of lower ore grades working practices must be changed in order to raise productivity.

Sir Roderick thus emphasised the need for Australian mining generally to bold costs in check against the background of world competition edging, for good measure, that while metal prices have been steady, or falling, in real terms the world has become more sparing in its use of metal. "Each kilogramme of metal goes a long way further than it did a decade ago."

He also had a few words for governments which looked upon the industry as one still able to bear further tax and excessive infrastructure costs. "CRA has searched for ways of demonstrating that long term considerations, not knee-jerk reactions, are the correct way of looking at the minerals industry."

But not all was gloom. Sir Roderick commented on the growth potential of the group's interest in the Klockner advanced steel-making technology which draws increasing attention and the "further encouraging progress" of the Camaloe aluminium arm.

He welcomed "desirable winds of change" blowing through the Australian economy and noted that Australia had competitive advantages in delivering to the fast-growing Asian markets on its doorstep. But he added that progress was "a major challenge facing your company's management."

# Smith & Nephew 28% profit advance at first quarter stage

THE SIGNIFICANT improvement in profits expected by Smith and Nephew Associated Companies for the first quarter ended March 24 1984 turns out to be 28.2 per cent. The figure was £10.92m, against £8.52m.

Activities of the group are the manufacture of surgical, medical and sanitary products, textiles and clothing, toiletries and plastics. Sales to third parties for the period—12 weeks—rose 10.4 per cent to £54.7m while the operating profit advanced 21.2 per cent to £10.31m. Net cost of borrowings was reduced to £75,000 (£1,069m) and related companies turned in £1.57m (£1.1m).

Tax takes £3.77m (£2.95m) and minorities add £2,000 (£5,000 debit), to leave the net attributable profit at £7.15m (£5.56m). Earnings are up from an estimated 2.13p to 2.72p.

In its last full year ended December 31 1983, the group pushed up its pre-tax profit by over £10m to £44.6m, and paid a dividend of 4.5p, compared with an adjusted 3.67p. Results for the 24 weeks ended June 16 1984 will be announced in mid-August. Last year the pre-tax

profit for that period came to £18m.

**Comment**

Smith and Nephew continues to live up to the highest expectations of the market, putting firmly behind itself the image of the worthy but dull performer of the late 1970s. The medical and healthcare division which has been largely responsible for this transformation has this quarter benefited particularly from increased exports from the UK, boosted by the cheap pound. The recently introduced Opsite, a form of plastic skin used in surgery, is doing well in this country and is now being made in the U.S. under licence. There are improvements in the textiles and plastics and tapes divisions, but the bygone division is suffering from heavy competition.

For the year the group could make £55m pre-tax, putting the shares, down 5p to 228p, assuming a 34 per cent tax rate, on a demanding but justified prospective multiple of over 14. Certainly, there is little for shareholders to complain about at the AGM tomorrow.

# More O'Ferrall expects further growth this year

PROFITS ROSE by 9 per cent from £2.02m to £2.22m at More O'Ferrall in 1983, and the directors are expecting a further improvement in the current year.

They say that so far in 1984, turnover of this outdoor advertising and ancillary services concern has continued to grow overall, and there are indications that in its major areas of activity the rate of inflation of costs is beginning to diminish.

This leads the directors to believe that the UK market for the company's medium is showing signs of hardening and that turnover growth will continue, and an improvement in profit levels will be achieved.

The taxable profits now reported were attained on turnover 14 per cent higher at £17.56m (£15.2m), and included related company profits of £900,000 (£863,000).

Following an increase in the interim dividend, the final payout is being lifted from 2.08p to

2.4p for a higher total of 8.5p (2.96p) net per 10p ordinary. Earnings per share are shown as 7p, some 27 per cent higher than the previous year's 5.5p.

Net profits amounted to £1.46m (£1.15m), after tax of £760,000 (£870,000), from which extraordinary debits total £164,000 (£19,000). After dividend payments the retained profit comes out at £587,000 (£511,000).

Most of the extraordinary debit was accounted for by a related company deferred tax provision of £282,000 this time. Property disposal profits were £5,000 (loss £2,000) and there was a deferred tax provision release of £123,000—last time there was a £7,000 loss attributable to capital increase expenses written off.

On a CCA basis, pre-tax profits were reduced to £1.77m (£1.71m).

**Comment**

More O'Ferrall's modest achievement has been to end three years of declining profits,

thanks to the general surge in advertising spending last year. But business conditions remained tough—with operating margins (down slightly to 8 per cent) squeezed by rising site rentals, the biggest contributor to costs. There are signs that the market is improving in the current year—the increase in rents has levelled off and rates to advertisers have hardened slightly as the industry settles down following the demise in 1982 of the British Posters Consortium. More O'Ferrall should also benefit increasingly from its 50 per cent stake in Adasah, which recovered sharply from a poor first half, and from its long-term deal with the British Airports Authority. Profits in France and Belgium are growing after a cost-saving switch from painted signs into printed posters. The group should move steadily and unexpectantly to £3.5m pre-tax this year, putting the shares, down 3p to 89p, on a prospective P/E of just under 10, assuming three years of declining profits, a 34 per cent tax charge.

# Noranda's good first quarter

THANKS TO the strong market for zinc in the first quarter of this year Canada's Noranda mining major reports a sharp turnaround to a net profit for the period of C\$28.8m (£15.8m) or 17 cents per share. This follows a loss of C\$29.2m in the final quarter of last year which left

the company with a 1983 net loss of C\$34.5m.

In fact Mr Alfred Powis, the chairman, said that the current year's first-quarter result would have been much better were it not for the two-month labour dispute in the company's British Columbia forest products industry which cost C\$21m. The

division ended up with a net loss of C\$10m in the quarter.

Cautiously, Mr Powis added that while he expected Noranda to return to profitability in 1984, "we don't expect a really satisfactory level of earnings for the year as a whole." Such earnings were not expected to be reached until 1985-86.

# SPRAIT success with big demand for warrants

Save & Prosper's launch of its Return of Assets Investment Trust has been oversubscribed. Of the three classes of shares on offer, the 15m preferred—which get a high and rising income with a small element of capital growth—have all been placed. Of the 15m ordinary—which are entitled to the bulk of any capital gain plus some income—11.25m were pre-placed and applications for 4.57m shares were received for the balance of 3.75m.

But the surprise was the demand for the warrants, which, in a novel move, S & P priced at 50p each, rather than "giving" them away as part of the package. Of the 3m available,

2.25m were pre-placed and applications for 9.25m were sent in for the remaining 750,000. All three types are expected to open at a premium when dealings start on Friday.

For the ordinary shares the basis of allocation is: applications for 100,000 shares or less will receive the full number applied for, those who applied for over 100,000 will get 100,000 shares plus 85.26 per cent of the excess asked for.

For the warrants the basis is: applications for 500 will receive 300; for 600—3,000 will get 750; for 1,500—2,000 will get 750; over 2,000 will get 2,000 plus 1.54 per cent of the excess over 2,000.

# MIM suffers a further operating loss

AUSTRALIA'S base metal and coal-producing MIM Holdings is still finding the going hard. It reports a net loss of A\$9.6m (£2.2m) for the 18 weeks ended April 1.

This follows a net loss of A\$3.5m for the previous 12 weeks which was struck before allowing an extraordinary credit of A\$8.57m for what was

described as "a reservation of output."

Looking on the bright side, MIM says that including this extraordinary credit and also a tax write-off for oil exploration it has made an unaudited net profit for the first 40 weeks of the current year to end-June of A\$10.2m compared with a net profit of A\$14.5m a year ago.

Sadly, MIM adds that the improved metal prices which

appeared in the earlier months of this year have been now largely dissipated. Furthermore, the strength of the Australian dollar against sterling means that prices on the London Metal Exchange are even weaker as far as MIM is concerned.

In a generally weaker mining sharemarket in London, unsettled by the latest rise in the U.S. prime rate, shares of MIM fell 15p to 217p yesterday.

# Gieves surges but gives warning

PROFITS, before tax, of Gieves Group, tailor and outfitter, publisher, motor dealer, surged from £739,144 to £1.33m for the year ended February 31, with second half figures increasing from £818,000 to £738,000.

Mr Michael Keeling, chairman, says that the year "was one in which nearly everything went right, with all four divisions producing improved results."

After a tax charge of £219,940, against a credit of £217,306, net profits were £1,011m (£1,066m) giving lower earnings of 17.3p (18p) per 20p share. The dividend, however, is boosted to 3.75p (2.25p) with a 2.65p final.

The directors state, however, that in his annual statement accompanying the accounts, Mr Keeling, chairman, will refer to expansion plans for the three largest divisions which may initially result in a reduction in the operating profits of one or more of these sectors.

"Accordingly, it is sensible to think in terms of the group earning slightly lower profits in the current year—perhaps in the region of £1m before tax." The directors add that a reduction of this order would not have any adverse impact on the level of dividends which would still be adequate to cover the group's principal activities giving both turnover and operating profits—£1.32m (£820,593) — shows: tailors and outfitters £7.63m (£7.17m) and £335,456 (£332,967);

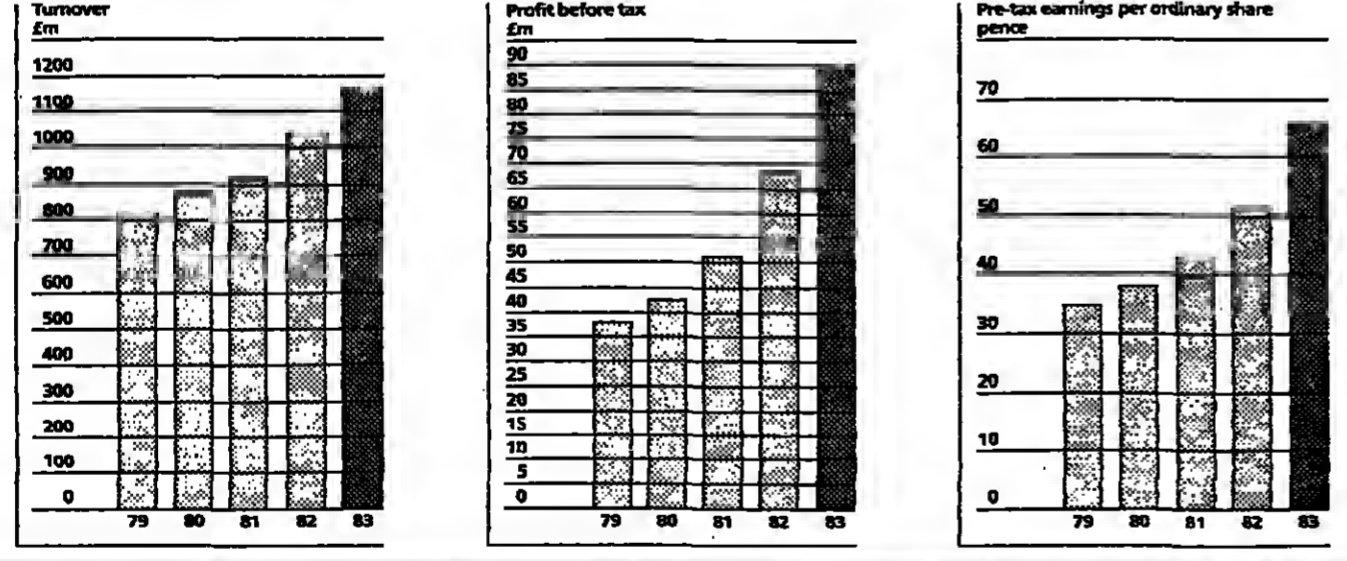
book and magazine manufacturers £7.58m (£6.76m) and £480,102 (£289,390) publishers and library suppliers £3.42m (£2.85m) and £383,078 (£254,613); motor and petrol retailers £5.83m (£5.74) and £106,479 (£104,194); central expenses of the parent company took £196,490 (£159,871).

The pre-tax figure was after lower interest payable, less receivable of £94,064 (£149,877), and consequential losses insurance proceeds of £68,328 credit last time.

| Granville & Co. Limited                                |         |                        |             |      |        |       |
|--|---------|------------------------|-------------|------|--------|-------|
| Member of NASDEM                                       |         |                        |             |      |        |       |
| 77/28 Lovat Lane London EC3R 5E5 Telephone 01-621 1122 |         |                        |             |      |        |       |
| Over-the-Counter Market                                |         |                        |             |      |        |       |
| 1983-84  | Company | Price Change           | Gross Yield | P/E  | Actual | Fully |
| High   | Low     |                        | (div. %)    |      | 1983   | 1982  |
| 142  | 120     | Asa, Brit. Ind. Dtd.   | 132         | 4.8  | 7.7    | 10.0  |
| 158  | 117     | Asa, Brit. Ind. CULS   | 144         | 10.0 | 8.5    | —     |
| 62   | —       | Barry's Group          | 62          | 8.1  | 8.5    | 17.7  |
| 38   | 21      | Armitage & Rhodes      | 34          | 7.2  | 3.2    | 13.4  |
| 330  | 147     | Barclay Hill           | 330         | 7.2  | 3.2    | 13.4  |
| 58   | 32      | Bray Technologies      | 54nd        | 8.5  | 8.5    | 8.0   |
| 200  | 157     | CCCL Ordinary          | 200         | 5.0  | 2.5    | —     |
| 152  | 121     | CCL 11p Conv Pref      | 152         | 15.7 | 10.3   | —     |
| 540  | 100     | Carborundum Abrasives  | 535         | 5.7  | 1.0    | —     |
| 249  | 100     | Cindico Group          | 103         | 17.9 | 17.0   | —     |
| 69   | 45      | Deborah Services       | 69          | 6.0  | 6.7    | 36.9  |
| 221  | 75      | Frank Hovell           | 221         | 8.7  | 4.3    | 8.5   |
| 202  | 79      | Frank Hovell Pr Dtd 87 | 202         | 6.7  | 4.3    | 8.5   |
| 89   | 28      | Frederick Parker       | 89          | 1    | 4.3    | 14.3  |
| 39   | 32      | George Blair           | 39          | 11.4 | 1.0    | —     |
| 80   | 48      | Ind Precision Castings | 80          | 7.3  | 14.8   | 13.8  |
| 2185   | 2150    | Inta New Poly Pd Dtd   | 2185        | 19.0 | 2.8    | —     |
| 365  | 124     | Ira Conv Pref          | 365         | 17.1 | 4.7    | —     |
| 123  | 61      | Jackson Group          | 123         | 4.5  | 2.7    | 6.4   |
| 263  | 126     | Jarvis Burnham         | 263         | 11.4 | 4.5    | 14.4  |
| 422  | 205     | Johnhouse Holdings     | 422nd       | 4.2  | 1.0    | 30.4  |
| 176  | 87      | Robert Jenkins         | 176         | 20.0 | 20.8   | 11.2  |
| 74   | 57      | Serentus "A"           | 74          | 5.7  | 10.0   | 8.5   |
| 120  | 61      | Torday & Catfield      | 120         | 2.8  | 4.1    | —     |
| 444  | 385     | Trivian Holdings       | 440         | —    | —      | 8.0   |
| 18   | 15      | Unicor Holdings        | 18          | 1.0  | 6.5    | 8.1   |
| 82   | 85      | Walter Alexander       | 85          | 6.8  | 8.0    | 7.5   |
| 278  | 236     | W. S. Yeates           | 247         | 17.1 | 8.9    | 6.0   |

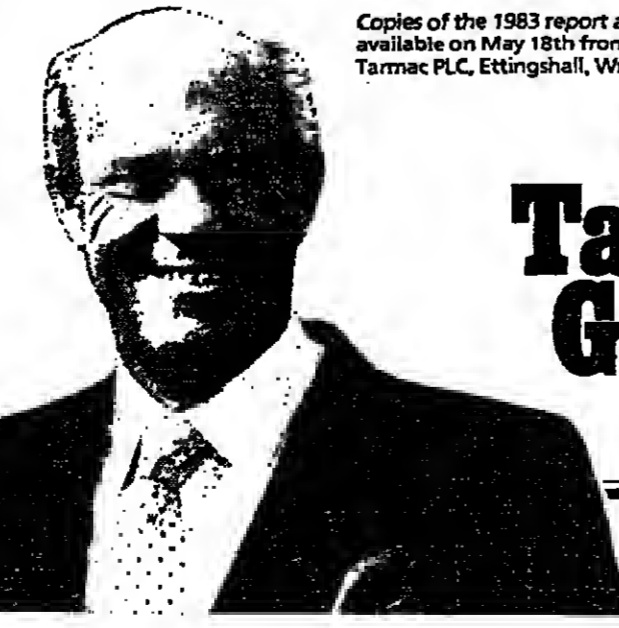
# TARMAC BUILDS ON SUCCESS

Pre-tax profit up by 30% to a record £89.6 million. Turnover up to £1.160 million. Pre-tax earnings per share pence up 28% — to 66.1 pence.



Group Chairman, Mr. Eric Pountain, says "It is very pleasing to me, in this my first year as Chairman, to be able to report another record year for the Group. Every one of our operating divisions has achieved improved profits. The Group is in excellent heart and is looking for further growth this year."

*Eric J. Pountain*  
Chairman



U.K. and International Construction, Quarrying, Road Surfacing, Building Products, House Building, Property Development, Industrial Activities, North Sea Interests.



**Tarmac Group**

Copies of the 1983 report and accounts will be available on May 18th from the Secretary, Tarmac PLC, Etingshall, Wolverhampton WV4 6JP.

## Cookson Group

Results for the year ended 31st December 1983

|                                 | 1983   | 1982   |
|---------------------------------|--------|--------|
| Turnover                        | £547m  | £476m  |
| Trading profit before interest  | £39.6m | £30.3m |
| Profit before tax               | £21.7m | £11.5m |
| Profit after tax and minorities | £11.6m | £3.0m  |
| Earnings per ordinary share     | 27.4p  | 6.9p   |
| Dividend per ordinary share     | 10.20p | 9.66p  |

"The outlook for the Group is better than at the time of the last report... Forecasts for the UK economy indicate a further improvement through this year, and the USA continues to be optimistic."

"1984 has started well and in most areas the demand for the Group's products is greater than in the corresponding months of 1983... the current situation is that better profitability continues to be achieved."

**IAN BUTLER**  
Chairman and Managing Director

Copies of the 1983 Annual Report may be obtained from The Secretary

**Cookson Group plc**  
 14 Gresham Street, London EC2V 7AT

## HOME CHARM PLC

**Competitive — in a Growing Market**

**1983 Results**

- \* Profit before tax more than doubled — up from £3.2m. to £7.0m.
- \* Net Trading Margins up from 3.2% to 5.4%
- \* Sales up 29% from £106.0m. to £136.5m.
- \* Retail Selling Areas up from 1,840m. sq. ft. to 1,932m. sq. ft.
- \* Dividends up 50% from 1.33p per share to 2.00p per share.

"The Group plans to open 22 new stores in 1984, bringing the total selling area to more than 2 1/2 million square feet. The £17 million rights issue approved on 10th April 1984 will enable the Group to seek further expansion. Current sales remain buoyant and with a management team acknowledged as one of the best in the business, I look forward to another successful year."

Manny Fogal  
Chairman

**HOME CHARM PLC**  
 14 Gresham Street, London EC2V 7AT



Lower copper prices reflect New York losses, Page 38

SECTION III - INTERNATIONAL MARKETS FINANCIAL TIMES

Wednesday May 9 1984

NEW YORK STOCK EXCHANGE 30-32 AMERICAN STOCK EXCHANGE 31-32 U.S. OVER-THE-COUNTER 32, 40 WORLD STOCK MARKETS 32 LONDON STOCK EXCHANGE 33-35 UNIT TRUSTS 36-37 COMMODITIES 38 CURRENCIES 39 INTERNATIONAL CAPITAL MARKETS 40

WALL STREET

Brave effort made to stage rally

A BRAVE attempt was made by Wall Street financial markets yesterday to stage the traditional rally into the Treasury funding season...

\$5.25bn of 10-year notes and tomorrow's \$4.75bn in 30-year bonds. The 30-year bonds traded in the when-issued market at a yield of 13.20 per cent.

The stock market opened lower but seemed relieved to have the expected increases in bank primes out of the way. Similarly, stocks appeared to have discounted higher rates at the Treasury auctions...

The closing report on Wall Street and updated U.S. market monitors were not available because of continuing industrial action at the Financial Times' printers in Frankfurt.

came from an increase in the quarterly dividend by General Motors, which reminded investors that the immediate future is one bright with strong corporate results.

The U.S. National Association of Purchasing Management also disclosed that a survey of its members showed they expect the economy to remain strong for at least 12 months.

IBM, which said it was introducing a new business cabling system, gained 3% to \$113. General Motors put on 5% to \$64 on its dividend news.

Shell Oil traded 3/4% off at \$58 as the bid from the parent group came to its head. City Investing, the insurance and housing group which will today disclose details of a buyout approach, remained at the overnight price of \$37. R. J. Rey-

nolds, number two in the U.S. cigarette market, eased 5/8 to \$62 1/2, awaiting news on bid rumours.

Other features included British Petroleum, 5/8 down at \$27 1/2 after confirming a dry well in the China Sea and Continental Illinois which held steady after firmly denying rumours in the New York and Chicago markets that it intended to file under Chapter 11 of the Bankruptcy Act.

The round of prime rate rises followed a jump in rates at the weekly Treasury bill auction to the highest levels since August 1982. The rush to the short end, which brought a warning on rates from Mr Martin Feldstein, the President's economic adviser, produced gains of 30 basis points in money market rates.

The bond market rallied at midsession when the key long bond moved up by about half a point to 91 1/2 after reports of a favourable outcome to the Treasury auction of 3-year notes. The improvement also reflected adjustments by traders to retail trading in the when-issued market ahead of tomorrow's auction of 30-year issues.

LONDON

Money data fail to calm nervousness

BETTER-than-expected UK money supply figures failed to calm the bout of nerves in London that accompanied rising U.S. interest rates and which left the FT Industrial Ordinary index down 10.8 at 904.8.

Glit-edged securities also spent a troubled session with early nervous selling of both short and longer-dated stocks. Some cheap buying brought temporary relief but by the close longs were down 1/2 - around the day's lows.

Some low coupon shorts lost 1/4 while higher coupon issues gave up 1/2. Most equity sectors encountered only light selling but the fall in values largely reflected defensive action on the part of dealers. The continued absence of any real demand, however, suggested some loss of confidence by investors, if only for the time being.

Chief price changes, Page 32; Details, Page 33; Share information service, Pages 34-35

TOKYO

Weaker yen proves a disincentive

THE WEAKER yen dragged shares down almost across the board in Tokyo yesterday, sending the Nikkei-Dow Jones market average sharply lower, writes Shigeo Mishiwa of Jiji Press.

Early in the session, investors sold heavy electricals like Hitachi and Toshiba and some high-priced light electricals, while textiles, non-ferrous metals and oils fell on small-lot selling. Only incentive-hacked issues attracted buyers.

The index declined virtually throughout the day to finish 106.52 down at 11,052.44. Volume shrank to 381.55m shares from 491.13m the previous day. Losers outpaced gainers by 501 to 229.

Many investors had expected Wall Street to continue rising, which would have stimulated foreign buying and buoyed the market performance in Tokyo. But they were disappointed by New York's modest performance after last week's severe setback and the yen's continued slide against the dollar in reaction to higher U.S. interest rates.

Some leading securities houses attempted to turn investor attention to big-capital steel and heavy electrical issues. But an absence of active foreign buying proved to be a disincentive. Sumitomo Metal Industries shed 5/8 to Y191, Mitsubishi Heavy Industries Y5 to Y281 and Ishikawajima-Harima Industries Y8 to Y189.

Blue-chip issues slipped over a broad front. Toshiba was hit by a bout of small-lot selling and fell Y19 to Y425 on news of technical trouble with a broadcasting satellite it had manufactured.

International populars suffered a similar fate. Hitachi lost Y14 to Y938, Matsushita Electric Industrial Y20 to Y1,980 and Toyota Motor Y20 to Y1,440. Sumitomo Metal Mining led the decline in non-ferrous metal issues, falling Y70 to Y1,790, while many textile, chemical and oil shares lost ground.

Despite the depressed market, Mochida Pharmaceutical benefited from brisk buying, and soared Y400 to Y5,350,

spurred by its development of an anti-cancer drug. Onoda Cement advanced Y4 to Y284 after disclosing an ambitious plan to expand its software business.

The bond market weakened further, which was attributed to a plunge in U.S. Treasury bond prices and the sagging yen. Early in the morning, the Debt Consolidation Fund bought Y100bn of 7.5 per cent long-term government bonds due January 1983 in a move to support the market. As a result, the yield on the bond, which opened at a high of 7.325 per cent against the previous session's close of 7.255 per cent, dropped to 7.285 per cent.

EUROPE

Emphasis remains on rates

THE REALITY of higher U.S. interest rates arrived too late to affect trading on most European bourses as investors were busy licking their wounds incurred during the previous session.

A number of corporate results helped to disperse but not eradicate the gloom in Frankfurt which saw the Commerzbank index fall a further 2.4 to 1,035.6 after Monday's 9-point decline.

AEG, returning to profit for 1983 and forecasting further profits this year, gained DM 2.80 to DM 101.20, the first time in two months it has closed above DM 100.

Higher earnings for Siemens in the first half of the current year softened the harsh tone of the session and it closed 10 pig down at DM 399.40.

The dollar's surge against the D-Mark, despite Bundesbank intervention, combined with fears of labour unrest among the metal and print unions to undermine sentiment.

Carmakers, many of which are located in areas likely to be hit by a strike, were weakened further. Porsche dipped DM 5 to DM 976, Daimler-Benz lost a further DM 3.30 to DM 560.20 and VW bit a new low for the year with a DM 2.30 fall to DM 196.20.

pared with DM 20.8m on Monday. The central bank also disclosed acceptance of DM 736.5m in tenders for three and four year notes issued by the Bundespost.

A senior member of the Bundesbank's Central Bank Council hinted that German interest rates may rise if a sustained outflow of funds to the U.S. develops, although this point had not yet been reached.

Brussels was affected by some leading stocks moving ex-dividend. They included EBES BFr 255 off at BFr 2,540, GB Inno BFr 235 down at BFr 3,070, Gevaert BFr 50 weaker at BFr 3,250, Societe Generale de Belgique BFr 65 lower at BFr 1,850 and Solvay BFr 340 down at BFr 8,500.

Elsewhere, Petrofina moved off its BFr 6,000 high for the year with a BFr 50 drop to BFr 7,950 and utility Electrobel gained BFr 70 to BFr 6,930, a new high for 1984. Fabrique Nationale continued weaker with a BFr 20 drop to BFr 2,150, and zinc producer

Small price movements over a broad front emerged in quiet Amsterdam despite Dutch institutional investor concern over the possibility of a collapse of the Government over the issue of cruise missiles.

Hooqovens rose Fl 2 to Fl 52.80, Gist-Brocades firmed Fl 1.70 to Fl 143 and Heineken a similar amount to Fl 134.

Marginally changed banks saw ABN rise 50 cents to Fl 370 and NMB held steady at Fl 146. In late trading, Unilever shed 90 cents to Fl 363.60.

Bonds were unchanged in sluggish trading ahead of a possible state loan announcement today.

Caution in Zurich tended to keep most shares at their overnight levels. With investors worried about higher U.S. interest rates, price moves, when they occurred, were small and difficult to maintain.

Swissair and banks opened higher but lost ground towards the close. The airline finished the day SwFr 10 up at SwFr 1,025.

Other sectors were quiet and featureless although insurers fared well with Swiss Re adding SwFr 50 to SwFr 8,250. Bonds weakened in the face of the stronger dollar.

Prices in Milan edged higher ahead of the Italian Banking Association's call for lower interest rates after Friday's 0.5 point cut in the discount rate to 15.5 per cent. Madrid started its week higher and Paris was closed for a national holiday.

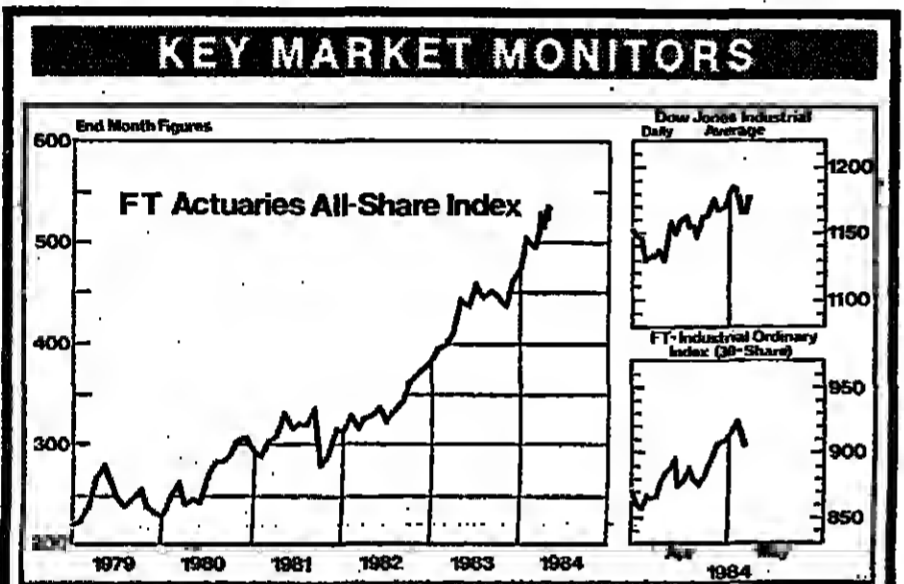
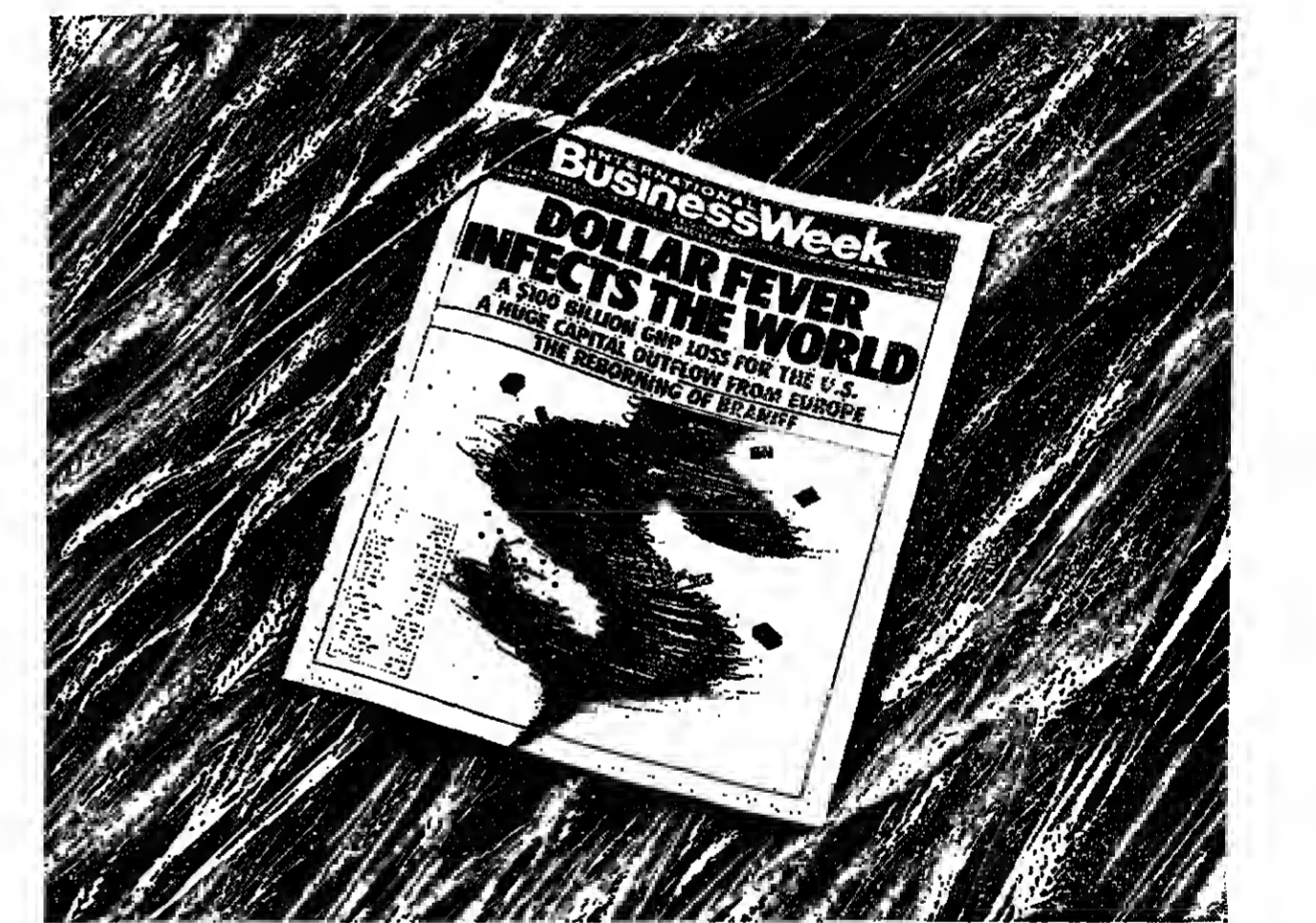


Table with columns: STOCK MARKET INDICES, CURRENCIES, INTEREST RATES, U.S. BONDS, FINANCIAL FUTURES, COMMODITIES. Lists various market indices and prices for different regions and commodities.

Table with columns: U.S. DOLLAR, STERLING, U.S. BONDS, FINANCIAL FUTURES, COMMODITIES. Lists exchange rates and prices for various financial instruments and commodities.

HONG KONG: SOME bargain hunting in otherwise quiet conditions enabled Hong Kong to reverse the previous day's sharp decline... SINGAPORE: CONCERN over political developments continued to undermine activity in Singapore... AUSTRALIA: WEAK metal prices in New York and exaggerated declines in the thin market left shares sharply lower... SOUTH AFRICA: THE continued decline in world bullion prices left gold shares at or near their day's lows in Johannesburg... CANADA: SHARES were mixed in Toronto with investor enthusiasm dampened by prime rate rises in Canada and the U.S.



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AMERICAN STOCK EXCHANGE COMPOSITE CLOSING PRICES

Table of American Stock Exchange Composite Closing Prices, listing various stocks with columns for 12-month high/low, current price, and change.

Continued on Page 32

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

Table of New York Stock Exchange Composite Closing Prices, listing various stocks with columns for 12-month high/low, current price, and change.

Notes explaining the data in the table, including symbols for dividends, splits, and other financial metrics.

WORLD ECONOMIC INDICATORS every Monday in the Financial Times



WORLD STOCK MARKETS

OVER-THE-COUNTER

Nasdaq national market, 3pm prices

LONDON

Chief price changes (in pence unless otherwise indicated)

RISERS

Table of rising stock prices in London, including Bolton Textile, Garnat Booth, Greenfields Leis, etc.

FALLS

Table of falling stock prices in London, including Eg 84pc 1985/87, Tr Spire 2002/06, etc.

AUSTRIA stock market data table with columns for stock name, price, and change.

GERMANY stock market data table with columns for stock name, price, and change.

NORWAY stock market data table with columns for stock name, price, and change.

AUSTRALIA (continued) stock market data table with columns for stock name, price, and change.

JAPAN (continued) stock market data table with columns for stock name, price, and change.

BELGIUM/LUXEMBOURG stock market data table with columns for stock name, price, and change.

SPAIN stock market data table with columns for stock name, price, and change.

SWEDEN stock market data table with columns for stock name, price, and change.

HONG KONG stock market data table with columns for stock name, price, and change.

SINGAPORE stock market data table with columns for stock name, price, and change.

DENMARK stock market data table with columns for stock name, price, and change.

ITALY stock market data table with columns for stock name, price, and change.

NETHERLANDS stock market data table with columns for stock name, price, and change.

SWITZERLAND stock market data table with columns for stock name, price, and change.

JAPAN (continued) stock market data table with columns for stock name, price, and change.

OVER-THE-COUNTER table listing various Nasdaq national market stocks with columns for stock name, price, and change.

FRANCE stock market data table with columns for stock name, price, and change.

NETHERLANDS (continued) stock market data table with columns for stock name, price, and change.

SWITZERLAND (continued) stock market data table with columns for stock name, price, and change.

AUSTRALIA (continued) stock market data table with columns for stock name, price, and change.

SOUTH AFRICA stock market data table with columns for stock name, price, and change.

OVER-THE-COUNTER (continued) table listing various Nasdaq national market stocks with columns for stock name, price, and change.

CANADA stock market data table with columns for stock name, price, and change.

TORONTO stock market data table with columns for stock name, price, and change.

AMERICAN STOCK EXCHANGE CLOSING PRICES table with columns for stock name, price, and change.

AMERICAN STOCK EXCHANGE CLOSING PRICES (continued) table with columns for stock name, price, and change.

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AMERICAN STOCK EXCHANGE CLOSING PRICES (continued) table with columns for stock name, price, and change.

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LONDON STOCK EXCHANGE

MARKET REPORT

RECENT ISSUES

U.S. rate rises make for nervous session in markets awaiting dearer UK credit

RECENT ISSUES

EQUITIES

Table of recent issues in equities, listing stock names, prices, and changes.

FIXED INTEREST STOCKS

Table of fixed interest stocks, including government and corporate bonds.

"RIGHTS" OFFERS

Table of rights offers, detailing the terms and prices of various securities.

OPTIONS

Table of options, listing call and put options for various stocks.

ACTIVE STOCKS

Table of active stocks, highlighting price changes and trading activity.

NEW HIGHS AND LOWS FOR 1984

Table showing new highs and lows for 1984 across various market sectors.

RISES AND FALLS YESTERDAY

Table detailing the rises and falls of various stocks and indices from the previous day.

LONDON TRADED OPTIONS

Table of London traded options, including call and put options for various assets.

FINANCIAL TIMES STOCK INDICES

Table of Financial Times Stock Indices, showing performance from May 1983 to May 1984.

HIGHS AND LOWS

Table of high and low prices for various stocks and indices.

S.E. ACTIVITY

Table of South-East activity, detailing trading volumes and prices.

Account Dealing Dates

Text detailing account dealing dates for various financial institutions.

Rising U.S. interest rates

Text discussing the impact of rising U.S. interest rates on the London stock market.

Inflicting the damage was

Text describing the damage inflicted by market movements and the role of various factors.

A troubled market in

Text discussing a troubled market in equity securities and the impact of various news items.

Greenfield Leisure up

Text reporting on Greenfield Leisure's performance and market position.

Banks drift lower

Text discussing the downward movement of bank shares in the market.

FT-ACTUARIES SHARE INDICES

Text explaining the FT-Actuaries Share Indices and their significance.

Table of FT-Actuaries Share Indices, showing performance for various sectors.

FIXED INTEREST

Table of fixed interest rates, including government and corporate bond yields.

course in moderate trading

Text describing moderate trading in the market and the impact of various news items.

Recently bolstered by

Text discussing how the market was recently bolstered by various factors.

Stockjobbers Akroyd

Text reporting on the activities of stockjobbers Akroyd and others.

Ultram decline

Text discussing the decline in Ultram's share price and the reasons behind it.

Options

Text providing an overview of options trading in the market.

Active stocks

Text highlighting active stocks and their performance in the market.

Friday's active stocks

Text detailing the active stocks on Friday and their market movements.

European Options Exchange

Table of the European Options Exchange, listing various options contracts.

Britannia to buy fourth 767

Text reporting on Britannia Airways' purchase of a fourth Boeing 767 aircraft.

Ultram decline

Text discussing the decline in Ultram's share price and the reasons behind it.

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FT LONDON SHARE INFORMATION SERVICE

Fidelity Japan Special Situations Trust. Find out more - ring Freephone Fidelity day or night. Fidelity International logo.

BRITISH FUNDS

Table of British Funds with columns for Name, Stock, Price, Dividend, and Yield. Includes sub-sections for 'Shorts' (Lives up to Five Years) and 'Five to Fifteen Years'.

Over Fifteen Years

Table of funds categorized as 'Over Fifteen Years'.

Undated

Table of undated funds.

Index-Linked

Table of index-linked funds.

CORPORATION LOANS

Table of corporation loans.

COMMONWEALTH AND AFRICAN LOANS

Table of Commonwealth and African loans.

LOANS

Table of general loans.

Public Board and Ind.

Table of public board and industrial shares.

Financial

Table of financial instruments.

FOREIGN BONDS & RAILS

Table of foreign bonds and rails.

AMERICANS

Table of American stocks.

CANADIANS

Table of Canadian stocks.

BANKS, HP & LEASING

Table of banks, hire purchase, and leasing companies.

BEERS, WINES & SPIRITS

Table of beer, wine, and spirit stocks.

BEERS, WINES—Cont.

Continuation of beer, wine, and spirit stocks.

BUILDING INDUSTRY, TIMBER AND ROADS

Table of building, timber, and road stocks.

CANADIANS

Continuation of Canadian stocks.

BANKS, HP & LEASING

Continuation of banks, hire purchase, and leasing companies.

BEERS, WINES & SPIRITS

Continuation of beer, wine, and spirit stocks.

BEERS, WINES & SPIRITS

Continuation of beer, wine, and spirit stocks.

DRAPERY & STORES—Cont.

Continuation of drapery and stores stocks.

ELECTRICALS

Table of electrical stocks.

CHEMICALS, PLASTICS

Table of chemical and plastic stocks.

DRAPERY AND STORES

Table of drapery and stores stocks.

ENGINEERING

Table of engineering stocks.

ENGINEERING—Continued

Continuation of engineering stocks.

ELECTRICALS

Continuation of electrical stocks.

CHEMICALS, PLASTICS

Continuation of chemical and plastic stocks.

DRAPERY AND STORES

Continuation of drapery and stores stocks.

ENGINEERING

Continuation of engineering stocks.

HOTELS—Continued

Table of hotel stocks.

INDUSTRIALS (Miscel.)

Large table of miscellaneous industrial stocks.

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INDUSTRIALS—Continued

Table of industrial stocks including companies like ICI, BP, and various engineering firms, with columns for stock price, price change, and volume.

LEISURE—Continued

Table of leisure-related stocks such as holiday resorts, travel agencies, and entertainment companies.

PROPERTY—Continued

Table of real estate and property stocks, including land development and housing companies.

INVESTMENT TRUSTS—Cont.

Table of investment trusts offering various asset classes like equities, bonds, and international investments.

OIL AND GAS—Continued

Table of oil and gas stocks, including major energy producers and refiners.

DAIWA SECURITIES logo and header for the International Finance section.

MINES—Continued

Table of mining stocks, categorized by region (Australians, Tins, Miscellaneous) and type of mineral.

MOTORS, AIRCRAFT TRADES

Table of motor and aircraft industry stocks, including manufacturers and parts suppliers.

NEWSPAPERS, PUBLISHERS

Table of newspaper and publishing stocks, including major media companies.

INSURANCES

Table of insurance stocks, including life, fire, and general insurance companies.

SHIPPING

Table of shipping and maritime stocks, including shipping lines and port authorities.

SHOES AND LEATHER

Table of shoe and leather goods stocks, including manufacturers and retailers.

TEXTILES

Table of textile stocks, including spinning, weaving, and apparel companies.

TOBACCO

Table of tobacco stocks, including major tobacco companies.

FINANCE, LAND, ETC

Table of financial, land, and other miscellaneous stocks, including banks and investment firms.

TRUSTS, FINANCE, LAND

Table of trusts, finance, and land-related stocks, including trust companies and real estate.

OVERSEAS TRADERS

Table of overseas trading stocks, including international trade and commodity companies.

PLANTATIONS

Table of plantation stocks, including rubber, sugar, and other agricultural commodities.

TEAS

Table of tea stocks, including major tea companies.

NOTES

Notes section containing financial news, market commentary, and company announcements.

REGIONAL & IRISH STOCKS

Table of regional and Irish stocks, including companies from various countries and Ireland.

OPTIONS—3-month call rates

Table of 3-month call option rates for various stocks and commodities.



AUTHORISED UNIT TRUSTS

Table listing various unit trusts such as Abbey Unit Trust, Allied Unit Trusts, and others, with columns for name, manager, and performance metrics.

FT UNIT TRUST INFORMATION SERVICE

Main table of unit trusts including Crown Life Unit Trust, Guinness Unit Trust, and many others, providing detailed financial data and performance statistics.

Table listing insurance companies and their services, including AA Friendly Society, Allianz, and others.

INSURANCES

Table listing various insurance policies and providers, including life, fire, and marine insurance.

Table listing various insurance companies and their services, including AA Friendly Society, Allianz, and others.

F.T. CROSSWORD PUZZLE No. 5411

Crossword puzzle grid with clues for Across and Down words, including 'Habitual criminal makes for difficult police work'.

Table listing various insurance companies and their services, including AA Friendly Society, Allianz, and others.

Table listing various insurance companies and their services, including AA Friendly Society, Allianz, and others.

Table listing various insurance companies and their services, including AA Friendly Society, Allianz, and others.

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INSURANCE & OVERSEAS MANAGED FUNDS

Table of insurance and managed funds, including sections for British National Life Assurance Co. Ltd., British Overseas Life Assurance Co. Ltd., and various other fund listings.

Table of insurance and managed funds, including sections for Lloyds Life Assurance Co., Standard Life Assurance Company, and various other fund listings.

Table of insurance and managed funds, including sections for Bank of America International S.A., Sun Life of Canada (UK) Ltd., and various other fund listings.

Table of insurance and managed funds, including sections for Sun Life of Canada (UK) Ltd., Sun Life of Canada (UK) Ltd., and various other fund listings.

OFFSHORE AND OVERSEAS

Table of offshore and overseas managed funds, including sections for Sun Life of Canada (UK) Ltd., Sun Life of Canada (UK) Ltd., and various other fund listings.

NOTES
Prices are in pence unless otherwise indicated and are quoted as at the time of going to press.



COMMODITIES AND AGRICULTURE

S. Africa sells milk powder to NZ

By Michael Holman in Johannesburg
IN THE first deal of its kind, South Africa has made the initial shipment of skimmed milk powder under a marketing agreement with the New Zealand Dairy Board...

Lower copper prices reflect New York losses

By JOHN EDWARDS, COMMODITIES EDITOR

COPPER PRICES tumbled on the London Metal Exchange yesterday as traders returned from the Bank Holiday in a gloomy mood. The scene was set by the New York market, which fell sharply on Monday while London was closed, reflecting the rise in U.S. interest rates...

tonnes to 270,875 tonnes when much larger decline had been forecast. The market also ignored news that the Port Pirie smelter in Australia, which produces the bulk of the country's lead exports, was beginning to shut down following the failure to reach a deal...

to accept a new wage agreement negotiated by union representatives last week. Earlier, it was feared the workers might reject the terms of the proposed labour contract, which would almost certainly have resulted in a strike.

Agreement on rubber to be discussed

KUALA LUMPUR—Representatives of the International Natural Rubber Organisation (Inro) will meet from May 16-18 to decide whether the International Natural Rubber Agreement should be renegotiated.

Weakness of sterling encourages coffee high

By Richard Mooney
COFFEE PRICES on the London futures market rose to the highest level for six and a half years yesterday encouraged by overnight gains in New York and the weakness of sterling against the dollar.

Growing fear of cocoa crop losses

THE DROUGHT damage suffered by Brazil's temporary cocoa crop is causing increasing concern among product manufacturers in Bahia. While the extent of crop losses remains unknown, some grinders have had to turn down sales to importers, a correspondent reports from Sao Paulo.

Sugar market sticks with bearish tone

WORLD SUGAR prices slipped to 12-month lows yesterday as the established bearish tone of the market was given further encouragement by the weakness of precious metals prices.

New soyabean meal futures contract opens

By John Edwards
TRADING in the new 20 tonnes soyabean meal futures contract began yesterday. At the moment the smallest size lot will be confined to the distant months, commencing February 1985, while the existing 100 tonnes contract is phased out at the close of the December 1984 delivery month.

Reports of surplus denied

REPORTS FROM consumer countries of a world cocoa surplus have been strongly denounced in a bid to avert the opening session of a two-day meeting of cocoa producers.

Price changes

Table with columns: In tonnes unless otherwise stated, May 8 1984, + or -, Month ago. Lists various metals and their price changes.

British commodity prices

Table with columns: Commodity, Unit, Price, % change. Lists various commodities like wheat, sugar, and oil.

American markets

Table with columns: Commodity, Price, % change. Lists various American market commodities.

Chicago

Table with columns: Commodity, Price, % change. Lists various Chicago market commodities.

Gold markets

Gold fell \$4 to \$372-374 on the London gold market yesterday, little changed from the previous closing level in the Far East, but well down from Friday's London peak of \$377-378, a result of the sharp improvement of the dollar on the foreign exchanges.

Gas oil futures

Table with columns: Month, Year's day close, + or -, Business Done. Lists gas oil futures prices.

Base metals

Table with columns: Commodity, Price, % change. Lists various base metals like copper, nickel, and tin.

Grains

Table with columns: Commodity, Price, % change. Lists various grain commodities.

Indices

Table with columns: Index, Value, % change. Lists various market indices.

London oil

A sharp fall in the value of European currencies brought the Gas Oil market down to \$28.50 per barrel, as a result of the sharp improvement of the dollar on the foreign exchanges.

Products - North West Europe

Table with columns: Commodity, Price, % change. Lists various products in North West Europe.

Copper

Table with columns: Commodity, Price, % change. Lists copper market data.

Wheat

Table with columns: Commodity, Price, % change. Lists wheat market data.

Chicago

Table with columns: Commodity, Price, % change. Lists various Chicago market commodities.

Spot prices

Table with columns: Commodity, Price, % change. Lists various spot prices.

London futures

Table with columns: Commodity, Price, % change. Lists various London futures prices.

Lead

Table with columns: Commodity, Price, % change. Lists lead market data.

Potatoes

Table with columns: Commodity, Price, % change. Lists potato market data.

Cotton

Table with columns: Commodity, Price, % change. Lists cotton market data.

European markets

Table with columns: Commodity, Price, % change. Lists various European market commodities.

Zinc

Table with columns: Commodity, Price, % change. Lists zinc market data.

Wool futures

Table with columns: Commodity, Price, % change. Lists various wool futures prices.

Soyabean meal

Table with columns: Commodity, Price, % change. Lists soyabean meal market data.

Meat/fish

Table with columns: Commodity, Price, % change. Lists various meat and fish market data.



CURRENCIES, MONEY and CAPITAL MARKETS

FOREIGN EXCHANGES

Sterling touches record low

The pound fell to its lowest level ever against the dollar in currency markets yesterday as U.S. interest rates continued to firm. U.S. prime rates were increased yesterday to 12 1/2 per cent from 12 per cent and Euro-dollar rates were about a point higher. Sterling may have been firmer against the dollar had UK base rates been increased but UK money supply figures were a little better than expected and clearing banks abstained for the time being from making any announcement.

The pound registered useful gains against many European currencies however and its trade weighted index was relatively stable after a weaker start. The dollar continued to improve against a background of increased concern over rising U.S. interest rates. The market was worried about the recent Federal refunding programme and signs that U.S. economic indicators may soon show signs of a further acceleration in U.S. economic growth. The dollar's England figures, the dollar's index rose to 121.7 from 120.6, its highest level since late January.

STERLING — Trading range against the dollar in 1984 is

1.4940 to 1.5335. April average 1.5228. Trade-weighted index 80.9 against 80.3 at noon and 80.1 in the morning and compared with 80.5 on Friday and 84.1 six months ago. Sterling touched an all time trading low in London of \$1.3775 against the dollar having opened at \$1.3855. It closed at \$1.3890-1.3940, a fall of 2.6c from Friday's close in London. Against the D-mark it rose to DM 2.750 from DM 2.5375 and PFR 11.80 compared with PFR 11.77. It was weaker against the Swiss franc at SwFr 6.1575 from SwFr 5.7125 and Y317 from Y320.

D-MARK — Trading range against the dollar in 1984 is 2.5425 to 2.5535. April average

2.5435. Trade-weighted index 124.0 against 123.8 six months ago.

The Bundesbank intervened at the Frankfurt fixing to sell \$50m as the D-mark fell sharply against the dollar. The U.S. currency rose to DM 2.750 from DM 2.5375 during the heaviest intervention session since January 9, when the German central bank sold \$61.9m. The fixing level was the highest for the dollar since February 1 as the dollar advanced on expectations of a strike vote by engineering workers. Sterling

rose to DM 3.8610 from DM 3.8430, and the Swiss franc to DM 1.2176 from DM 1.2134. Within the EMS the Dutch guilder fell to DM 89.00 per 100 guilders from DM 89.00, while the French franc was unchanged at DM 32.600 per 100 francs.

ITALIAN LIRA — Trading range against the dollar in 1984 is 1,720.75 to 1,581.00. April average 1,625.90. Trade-weighted index 47.9 against 49.5 six months ago.

The lira fell to its lowest level for 8 1/2 months against the dollar at yesterday's Milan fixing, while the D-mark showed little change and was fixed at 1.618, compared with 1.618,03 on Monday. The Bank of Italy bought \$25.5m of the \$50m traded officially when the dollar rose to L1,717.60 from L1,700. The central bank did not intervene against the D-mark. Sterling rose to L2,380.50 from L2,372.50, and the Swiss franc to L1,750.50 from L1,749.50. Within the EMS the French franc fell to L201.34 from L201.58.

The lira fell to its lowest level for 8 1/2 months against the dollar at yesterday's Milan fixing, while the D-mark showed little change and was fixed at 1.618, compared with 1.618,03 on Monday. The Bank of Italy bought \$25.5m of the \$50m traded officially when the dollar rose to L1,717.60 from L1,700. The central bank did not intervene against the D-mark. Sterling rose to L2,380.50 from L2,372.50, and the Swiss franc to L1,750.50 from L1,749.50. Within the EMS the French franc fell to L201.34 from L201.58.

£ in New York (latest)

Spot \$1.3895-1.3965 1.3930-1.3940

1 month 0.85-0.87 0.85-0.86 0.86

3 months 0.75-0.77 0.75-0.76 0.76

6 months 0.65-0.67 0.65-0.66 0.66

12 months 0.55-0.57 0.55-0.56 0.56

18 months 0.45-0.47 0.45-0.46 0.46

24 months 0.35-0.37 0.35-0.36 0.36

30 months 0.25-0.27 0.25-0.26 0.26

36 months 0.15-0.17 0.15-0.16 0.16

48 months 0.05-0.07 0.05-0.06 0.06

60 months 0.00-0.02 0.00-0.01 0.01

72 months 0.00-0.01 0.00-0.00 0.00

84 months 0.00-0.01 0.00-0.00 0.00

96 months 0.00-0.01 0.00-0.00 0.00

108 months 0.00-0.01 0.00-0.00 0.00

120 months 0.00-0.01 0.00-0.00 0.00

132 months 0.00-0.01 0.00-0.00 0.00

144 months 0.00-0.01 0.00-0.00 0.00

156 months 0.00-0.01 0.00-0.00 0.00

168 months 0.00-0.01 0.00-0.00 0.00

180 months 0.00-0.01 0.00-0.00 0.00

192 months 0.00-0.01 0.00-0.00 0.00

204 months 0.00-0.01 0.00-0.00 0.00

216 months 0.00-0.01 0.00-0.00 0.00

228 months 0.00-0.01 0.00-0.00 0.00

240 months 0.00-0.01 0.00-0.00 0.00

252 months 0.00-0.01 0.00-0.00 0.00

264 months 0.00-0.01 0.00-0.00 0.00

276 months 0.00-0.01 0.00-0.00 0.00

288 months 0.00-0.01 0.00-0.00 0.00

300 months 0.00-0.01 0.00-0.00 0.00

312 months 0.00-0.01 0.00-0.00 0.00

324 months 0.00-0.01 0.00-0.00 0.00

336 months 0.00-0.01 0.00-0.00 0.00

348 months 0.00-0.01 0.00-0.00 0.00

360 months 0.00-0.01 0.00-0.00 0.00

372 months 0.00-0.01 0.00-0.00 0.00

384 months 0.00-0.01 0.00-0.00 0.00

396 months 0.00-0.01 0.00-0.00 0.00

408 months 0.00-0.01 0.00-0.00 0.00

420 months 0.00-0.01 0.00-0.00 0.00

432 months 0.00-0.01 0.00-0.00 0.00

444 months 0.00-0.01 0.00-0.00 0.00

456 months 0.00-0.01 0.00-0.00 0.00

468 months 0.00-0.01 0.00-0.00 0.00

480 months 0.00-0.01 0.00-0.00 0.00

492 months 0.00-0.01 0.00-0.00 0.00

504 months 0.00-0.01 0.00-0.00 0.00

516 months 0.00-0.01 0.00-0.00 0.00

528 months 0.00-0.01 0.00-0.00 0.00

540 months 0.00-0.01 0.00-0.00 0.00

552 months 0.00-0.01 0.00-0.00 0.00

564 months 0.00-0.01 0.00-0.00 0.00

576 months 0.00-0.01 0.00-0.00 0.00

588 months 0.00-0.01 0.00-0.00 0.00

600 months 0.00-0.01 0.00-0.00 0.00

612 months 0.00-0.01 0.00-0.00 0.00

624 months 0.00-0.01 0.00-0.00 0.00

636 months 0.00-0.01 0.00-0.00 0.00

648 months 0.00-0.01 0.00-0.00 0.00

660 months 0.00-0.01 0.00-0.00 0.00

672 months 0.00-0.01 0.00-0.00 0.00

684 months 0.00-0.01 0.00-0.00 0.00

696 months 0.00-0.01 0.00-0.00 0.00

708 months 0.00-0.01 0.00-0.00 0.00

FINANCIAL FUTURES

Eurodollar record

Trading was quite hectic on the London International Financial Futures Exchange yesterday. Eurodollars for June delivery opened sharply lower at 88.47, following the weakness of U.S. money markets on Monday as a result of comments by Dr Henry Kaufman of Salomon Brothers on Friday about a possible spectacular rise in U.S. interest rates. This triggered some heavy selling which disappointed traders buying the contract was at a low point within the present cycle. Very firm Eurodollar interest rates in the cash market also increased the volume of selling, and the market fell to a low of 88.32, encouraged by a further rise in U.S. bank prime lending rates to 12 1/2 per cent from 12 per cent. As trading on Liffe touched a record of 7.402 for all Eurodollar delivery dates the June contract closed at 88.35, compared with 88.74 on Friday. Liffe futures also opened weak in response to the decline of the U.S. bond market and on fears of a rise in UK clearing bank

base lending rates. The June contract opened at 104.29, and touched a low of 104.24, but then rallied on better than expected mid-April money supply figures, rising to a high point of 105.19 as banks failed to lift base rates and U.S. bond prices opened rather firmer than anticipated. June gilt closed at 104.25, compared with 105.16 previously, as prices retreated with the market once again reflecting fears that U.S. interest rates will remain firm.

Three-month sterling deposits showed a similar trend to gilt futures, with June delivery closing at 20.62, against 20.77 rather firmer than anticipated. June gilt closed at 104.25, compared with 105.16 previously, as prices retreated with the market once again reflecting fears that U.S. interest rates will remain firm.

Trading in the new stock index was fairly quiet. The June contract fell rapidly from an opening of 111.70 to find some support at 110.00, but then continued to decline in line with the cash market, despite a general feeling that the present future's price represents attractive opportunities.

FT-SE 100 INDEX

225 per full index point

June 110.05 111.70 109.90 112.56

July 111.05 111.65 111.05 112.40

Aug 112.00 — — 115.00

Volume 1,176 (894)

Previous day's open int. 354 (294)

CHICAGO

U.S. TREASURY BONDS (CBT)

0% 610,000 32nds of 100%

June 83.18 83.10 83.42 83.29

July 82.15 82.15 82.00 82.18

Aug 82.03 82.03 81.20 82.08

Sept 81.24 81.24 81.11 81.36

Oct 81.15 81.15 81.03 81.08

Nov 81.07 81.07 80.27 81.08

Dec 81.00 81.00 80.20 81.02

Volume 7,402 (5,258)

Previous day's open int. 15,358 (15,521)

THREE-MONTH STERLING DEPOSIT

225,000 points of 100%

June 88.35 88.35 88.32 88.74

July 88.72 88.72 88.70 89.23

Aug 89.16 89.16 89.13 89.30

Sept 89.59 89.59 89.56 89.76

Oct 89.77 89.77 89.74 89.93

Nov 89.95 89.95 89.92 90.12

Dec 90.13 90.13 90.10 90.29

Volume 2,328 (2,100)

Previous day's open int. 9,862 (8,359)

U.S. TREASURY BILLS (MM)

\$1m points of 100%

June 89.03 89.05 89.51 89.91

July 89.07 89.10 89.54 89.99

Aug 89.11 89.14 89.58 90.07

Sept 89.15 89.18 89.62 90.15

Oct 89.19 89.22 89.66 90.23

Nov 89.23 89.26 89.70 90.31

Dec 89.27 89.30 89.74 90.39

Volume 1,176 (894)

Previous day's open int. 354 (294)

20-YEAR 12% NOTIONAL DLT

500,000 32nds of 100%

June 89.03 89.05 89.51 89.91

July 89.07 89.10 89.54 89.99

Aug 89.11 89.14 89.58 90.07

Sept 89.15 89.18 89.62 90.15

Oct 89.19 89.22 89.66 90.23

Nov 89.23 89.26 89.70 90.31

Dec 89.27 89.30 89.74 90.39

Volume 1,176 (894)

Previous day's open int. 354 (294)

STERLING (LONDON) \$ per £

June 88.35 88.35 88.32 88.74

July 88.72 88.72 88.70 89.23

Aug 89.16 89.16 89.13 89.30

Sept 89.59 89.59 89.56 89.76

Oct 89.77 89.77 89.74 89.93

Nov 89.95 89.95 89.92 90.12

Dec 90.13 90.13 90.10 90.29

Volume 1,176 (894)

Previous day's open int. 419 (478)

DEUTSCHE MARKS

DM 125,000 per £M

June 89.03 89.05 89.51 89.91

July 89.07 89.10 89.54 89.99

Aug 89.11 89.14 89.58 90.07

Sept 89.15 89.18 89.62 90.15

Oct 89.19 89.22 89.66 90.23

Nov 89.23 89.26 89.70 90.31

Dec 89.27 89.30 89.74 90.39

Volume 1,176 (894)

Previous day's open int. 419 (478)

JAPANESE YEN Y12.5m per Y100

June 89.03 89.05 89.51 89.91

July 89.07 89.10 89.54 89.99

Aug 89.11 89.14 89.58 90.07

Sept 89.15 89.18 89.62 90.15

Oct 89.19 89.22 89.66 90.23

Nov 89.23 89.26 89.70 90.31

Dec 89.27 89.30 89.74 90.39

Volume 1,176 (894)

Previous day's open int. 419 (478)

SWISS FRANC SFR 125,000

June 89.03 89.05 89.51 89.91

July 89.07 89.10 89.54 89.99

Aug 89.11 89.14 89.58 90.07

Sept 89.15 89.18 89.62 90.15

Oct 89.19 89.22 89.66 90.23

Nov 89.23 89.26 89.70 90.31

Dec 89.27 89.30 89.74 90.39

Volume 1,176 (894)

Previous day's open int. 419 (478)

CANADIAN DOLLAR Cdn \$100 per \$100

June 89.03 89.05 89.51 89.91

July 89.07 89.10 89.54 89.99

Aug 89.11 89.14 89.58 90.07

Sept 89.15 89.18 89.62 90.15

Oct 89.19 89.22 89.66 90.23

Nov 89.23 89.26 89.70 90.31

Dec 89.27 89.30 89.74 90.39

Volume 1,176 (894)

Previous day's open int. 419 (478)

EUROPEAN CURRENCY UNIT-RATES

ECU amounts

Belgian Franc ... 2.4810

Danish Krone ... 13.7603



*This announcement appears as a matter of record only.*

**U.S. \$57,443,000**

Leveraged Lease Financing of two Boeing 747-206B Aircraft

for

**KLM ROYAL DUTCH AIRLINES**  
(lessee)

by an affiliate of

**Equilease Corporation**  
(lessor)

and

Amsterdam-Rotterdam Bank N.V.  
Banque Nationale de Paris (Amsterdam Branch)  
Europartners Bank (Nederland) N.V.  
European American Bank & Trust Company  
F van Lanschot Bankiers N.V.  
Société Générale (Amsterdam Branch)  
(Loan participants)

Debt underwritten and arranged by

**Amsterdam-Rotterdam Bank N.V.**  
as Agent for the Loan Participants

**Dominion Securities Ames  
Capital Funding**

Arranged the Equity and  
acted as Financial Advisers

December, 1983

# INTERNATIONAL CAPITAL MARKETS

## Eurodollar bonds hit by U.S. pessimism

By Mary Ann Steghart in London

PRICES of Eurodollar bonds tumbled yesterday - in some cases by over 1 point - in response to a deeply pessimistic New York market.

The six-month Eurodollar rate rose to 12 per cent, up nearly 1/2 point on Friday's close, and dealers reported no buying interest. Turnover was low in the secondary market which had a very nervous undertone.

The D-Mark sector was also hit, with prices falling by 1/2 point since Friday. This forced the cancellation of Credit d'Equipement des Petites et Moyennes Entreprises' scheduled DM 150m bond.

It also meant that the European Investment Bank had to pay a high 8 per cent coupon on its 10-year DM 250m bond launched through Deutsche Bank. The issue, which is priced at 98 1/2, traded at a discount of just over 1 point.

Finland is raising Nkr 200m through a five-year, 11 1/2 per cent

## FT INTERNATIONAL BOND SERVICE

The list shows the 200 latest international bond issues for which an adequate secondary market exists. The following are closing prices for May 8.

| U.S. DOLLAR             | Issued | Par | Offer   | Change | Yield |
|-------------------------|--------|-----|---------|--------|-------|
| Alaska Housing 1 1/4 84 | 100    | 100 | 99 1/2  | -1/2   | 12.65 |
| American Savings 12 83  | 125    | 125 | 124 1/2 | -1/2   | 12.63 |
| Australia 1 1/4 84      | 100    | 100 | 99 1/2  | -1/2   | 12.65 |
| Australia 1 1/4 84      | 100    | 100 | 99 1/2  | -1/2   | 12.65 |
| Australia 1 1/4 84      | 100    | 100 | 99 1/2  | -1/2   | 12.65 |
| Bank of Tokyo 1 1/4 84  | 100    | 100 | 99 1/2  | -1/2   | 12.65 |
| Bank of Tokyo 1 1/4 84  | 100    | 100 | 99 1/2  | -1/2   | 12.65 |
| Bank of Tokyo 1 1/4 84  | 100    | 100 | 99 1/2  | -1/2   | 12.65 |
| Bank of Tokyo 1 1/4 84  | 100    | 100 | 99 1/2  | -1/2   | 12.65 |
| Bank of Tokyo 1 1/4 84  | 100    | 100 | 99 1/2  | -1/2   | 12.65 |

**BHF Bank bond average**

| May 8  | Previous |
|--------|----------|
| 98.424 | 98.460   |
| High   | 100.000  |
| Low    | 100.000  |

bond led by Den norske Creditbank. Priced at par, this is the first Norwegian kroner bond issue since March.

Today should see the launch of a \$75m-\$100m building bond for Electricité de France. It is likely to have a 96-year maturity and will probably be led by Kleinwort Benson.

Malaysia is tapping the Swiss franc market for between SwFr 80m and SwFr 100m with an eight-year bond paying around 6 1/2 per cent. Lead manager Credit Suisse will price the deal on Friday.

Yamatichi Securities is leading a Y15bn Samurai bond for the City of Oslo. It has a 10-year life and a 7 1/2 per cent coupon at a price of 99 1/2.

Prices in Switzerland were down 1/2 point yesterday on the back of a strong dollar and worries about interest rates.

**CONVERTIBLE**

| U.S. DOLLAR             | Issued | Par | Offer   | Change | Yield |
|-------------------------|--------|-----|---------|--------|-------|
| Alaska Housing 1 1/4 84 | 100    | 100 | 99 1/2  | -1/2   | 12.65 |
| American Savings 12 83  | 125    | 125 | 124 1/2 | -1/2   | 12.63 |
| Australia 1 1/4 84      | 100    | 100 | 99 1/2  | -1/2   | 12.65 |
| Australia 1 1/4 84      | 100    | 100 | 99 1/2  | -1/2   | 12.65 |
| Australia 1 1/4 84      | 100    | 100 | 99 1/2  | -1/2   | 12.65 |

### CLASSIFIED ADVERTISEMENT RATES

| Per line (cm)                     | Single (cm) | 3 (cm) |
|-----------------------------------|-------------|--------|
| Commercial & Industrial           | 8.50        | 33.00  |
| Residential Property              | 7.50        | 25.00  |
| Appointments                      | 10.00       | 34.50  |
| Business Investment Opportunities | 9.50        | 33.00  |
| Business for Sale/Wanted          | 8.50        | 33.00  |
| Personal                          | 7.50        | 25.00  |
| Minor Cars                        | 7.50        | 25.00  |
| Hotels & Travel                   | 9.50        | 33.00  |
| Contracts & Tenders               | 9.50        | 33.00  |
| Book Publishers                   | -           | 15.50  |

**YEN STRAIGHTS**

| Issued              | Par | Offer | Change | Yield |      |
|---------------------|-----|-------|--------|-------|------|
| Asia Dev 8 7/8 84   | 100 | 100   | 99 1/2 | -1/2  | 7.48 |
| Caribbean 7 3/4 84  | 100 | 100   | 99 1/2 | -1/2  | 7.48 |
| Lat-Am Dev 8 7/8 84 | 100 | 100   | 99 1/2 | -1/2  | 7.73 |

### OVER-THE-COUNTER

| Stock                  | Sales (thous) | High   | Low    | Last   | Chng |
|------------------------|---------------|--------|--------|--------|------|
| Continued from Page 32 |               |        |        |        |      |
| Alcoa                  | 100           | 17 1/2 | 17 1/2 | 17 1/2 | -    |
| Amstar                 | 100           | 15 1/2 | 15 1/2 | 15 1/2 | -    |
| Amstar                 | 100           | 15 1/2 | 15 1/2 | 15 1/2 | -    |
| Amstar                 | 100           | 15 1/2 | 15 1/2 | 15 1/2 | -    |
| Amstar                 | 100           | 15 1/2 | 15 1/2 | 15 1/2 | -    |

*This announcement appears as a matter of record only.*

**SUMITOMO FORESTRY CO., LTD.**

(Sumitomo Ringyo Kabushiki Kaisha)  
(Incorporated under the laws of Japan)

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ISSUE PRICE 100 PER CENT.

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Sumitomo Trust International Limited

May 9th, 1984

**Azienda Autonoma delle  
Ferrovie dello Stato  
SDR 80,000,000**

Floating Rate Notes due 1985

by virtue of existing Legislation  
Direct and Unconditional General Obligations of  
**The Republic of Italy**

In accordance with the terms and conditions of the Debentures, notice is hereby given that for the interest period commencing on May 10th, 1984 the Debentures will bear interest at the rate of 10 1/2% per annum. The interest payable on the relevant Interest Payment Date, November 13th, 1984 against Coupon No. 6 will be SDR 5,454,167.

The US\$SDR rate which will determine the US\$ amount payable in respect of Coupon No. 6 will be fixed together with the Interest Rate for the period commencing November 13th, 1984, on November 8th, 1984.

Fiscal Agent  
**ORION ROYAL BANK LIMITED**  
A member of The Royal Bank of Canada Group

**COMISION FEDERAL DE  
ELECTRICIDAD  
(CFE)**

**US\$100,000,000  
FLOATING RATE NOTES DUE 1988**

In accordance with the provision of the Notes, notice is hereby given that for the six-month interest period from 10th May 1984, to 13th November 1984, the Notes will carry an interest rate of 12 1/2% per annum and the coupon amount per US\$5,000 will be US\$319.78.

**Standard Chartered**  
Reference Agent

**CAVENDES**

**U.S.\$20,000,000**

Bearer Depository Receipts  
representing undivided interests in a  
Floating Rate Deposit finally due 1986

with  
**C. A. Cavendes  
Sociedad Financiera**  
(Incorporated with limited liability in the Republic of Venezuela)

evidenced by consecutive three month Certificates of Deposit

Notice is hereby given pursuant to the Terms and Conditions of the Bearer Depository Receipts (the "BDRs") that for the three months from 9th May, 1984 to 9th August, 1984 the BDRs will carry an interest rate of 11 1/2% per annum. On 9th August, 1984 interest of U.S.\$29.77 will be due per U.S.\$1,000 BDR and U.S.\$297.08 due per U.S.\$10,000 BDR for Coupon No. 20.

European Banking Company Limited  
(Agent Bank)

9th May, 1984



# FINANCIAL TIMES SURVEY

## DINORWIG Hydro-electric power scheme

This giant £450m engineering plant inside a mountain is a key part of the UK's stand-by capacity, able to respond in ten seconds to demands on the national grid

Survey by  
Robin Reeves

THE LARGEST hydro-electric pumped storage scheme in Europe will be officially opened today by Prince Charles in the heart of the mountains of Snowdonia, the culmination of an idea first conceived 15 years ago by Britain's Central Electricity Generating Board.

Constructed over the past 10 years at a cost of £450m, the scheme is now being hailed as a major civil engineering achievement, and one which also offers important lessons in the management of industrial relations in large projects and in sensitivity towards the environment. Commercially, too, the project is proving a success.

Yet, the initial obstacles in the way of the scheme were many. The project at Llanberis was first mooted when the CEB's electricity demand curves were still pointing upwards. More capacity, rather than more flexibility and economy in operation, was still the main priority. Dinorwig emerged at the top of the CEB's projects list, somewhat fortuitously, after the board had been forced to pause in its nuclear programme because of the severe problems run into by the advanced gas cooled reactor system.

Promoted by Act of Parliament rather than a local public inquiry, the project ran into a storm of protest from conservation interests, alarmed at what they feared would be desecration of a national park. But eventually, the then main local

authority involved, Caerarthshire County Council, agreed to support the scheme in exchange for a wide range of assurances, including a commitment that at least 70 per cent of the workforce would be recruited locally.

Considerable modifications and alterations to the original design were also introduced to meet the environmental objections.

### Tunnel

Within weeks of starting on site in early 1974, the initial exploratory tunnel collapsed just minutes before it was due to be occupied by the morning shift. For several months, the future of the whole scheme hung in the balance while the wisdom of trying to build an underground power station in slate rock—never tunnelled on such a large scale before—was re-examined.

This major uncertainty, combined with the high inflation of the period, produced a distinct reluctance on the part of the civil engineering industry to tender in the normal way for what was at the time the largest civil contract ever offered in the UK. It was only overcome by inviting potential contractors to discuss the scheme in detail and encouraging them to form consortia to bid for a target price/cost-reimbursable contract.

The basic concept of Dinorwig, in an increasingly complicated world, remains simple. It does two things: one is to store electrical power by using cheap night-time electricity to pump water from a lower to an upper reservoir, the other is to generate power by allowing the same water to flow back down



THE PROJECT HAS INVOLVED CIVIL, ELECTRICAL AND HYDRAULIC ENGINEERING ON A BIG SCALE

to the lower reservoir generating hydro-electric power to meet day-time peaks in demand. Its turbines are capable of both pumping and generating.

Britain's first major pumped storage station opened at Ffestiniog just over the mountains from Dinorwig in 1963. Two more were built at Crachan and Foyers in Scotland before

Dinorwig got under way. But none came near to matching either the scale or the civil engineering challenge presented by the Dinorwig scheme at the outset.

In the course of the past ten years, more than 3m tonnes of slate have been blasted and excavated to form a 11.4-km maze of tunnels and create

of it the result of more than 150 years of intensive slate quarrying on the site, has also been shifted around to adapt two natural Snowdonia lakes—Llyn Marchlyn Mawr and Llyn Peris—to the hydraulic requirements of the scheme.

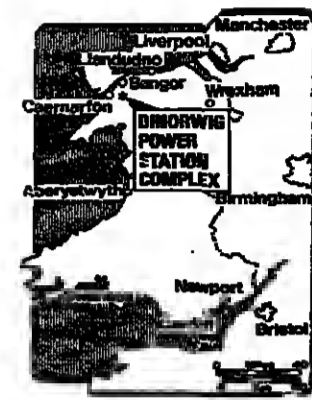
At its peak, the project employed a workforce of 2,500, more than 90 per cent of whom were recruited locally. The labour force was equipped for its task by unprecedented on-site training facilities which also made a key contribution to Dinorwig's excellent industrial relations. By comparison with other major construction sites, stoppages were minimal and none lasted for longer than three weeks.

The safety record was also exemplary: over the 10-year construction period there were just five fatalities of which one only was due to a rock fall. The grim prediction at the start of the project—based on Alpine tunnel driving and similar major underground projects—was at least 30 deaths.

The result of the labours of the men of Gwynedd and of the plant and equipment manufacturers is a hydro-electric pumped storage station of 1,800 MW installed generating capacity, six times the capacity of Ffestiniog a few miles away; yet, thanks to the tremendous attention paid to the environmental impact, far less of an intrusion into the landscape. Indeed, in a few years' time, it will be barely noticeable from most viewpoints.

The scheme is exceeded in size by a U.S. station, Luddington, and another 55 per cent finished American scheme in Bath county. But so far unique to Dinorwig is its unprecedentedly rapid response to power demand. It has the capacity to "plug" up to 1,300 MW of power into the national grid in 10 to 11 seconds to meet breakdowns in supply from conventional stations or sudden surges in electricity demand—the fastest response rate of any pumped storage station in the world.

In practice, Dinorwig has completely altered the way in which the CEB manages the



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electricity supply system from day to day. No longer is it required to run fossil fuel stations partially, and therefore inefficiently, loaded for unexpected demand surges or supply breakdowns. Thanks to Dinorwig, the CEB's "spinning reserve"—the stand-by capacity essential to meet its statutory obligation to provide a reliable supply of electricity at all times—is now being maintained wholly by hydroelectric stations.

Overall, the CEB calculates the fuel and other costs savings stemming from the new flexibility which Dinorwig has introduced into the management of the national grid day-in-day at a figure approaching £50m a year, or more than £2 a head for its 20m consumers.

CONTINUED ON  
NEXT PAGE

# Brunel would have loved this one

Squarely in the mainstream of those pioneering ventures of the nineteenth century, Dinorwig power station is a spectacular twentieth century showcase for British engineering.

The imagination and skill it takes to build a power station underneath a mountain belong to a tradition of engineering excellence.

Brunel would have relished the challenge of driving ten miles of shafts and tunnels, of building a cavern twice as long as a football pitch and sixteen storeys high. Water coursing through massive turbines at 92,000 gallons every second would have excited him.

Using its power to cope with surges in demand in other parts of the country and the idea of pumping the water back up the mountain using off-peak electricity would probably have puzzled him.

But then, times have changed.

Generation Development and Construction Division,  
Central Electricity Generating Board,  
Barnett Way,  
Barnwood,  
Gloucester.  
GL4 7RS



DINORWIG 2

Careful planning has ensured that both landscape and natural habitats are safeguarded

Strong influence by environment groups



View across Llyn Peris showing (centre) the Wellington Pool bridge where water is discharged from the power station into the lake. The carved out lower slopes of the Elidir Fawr bear witness to a century of slate quarrying

ALTHOUGH Britain's environmental organisations would rather Dinorwig had never been built in national park, their pressure did play an important part in the initial site selection and the efforts made to minimise its impact upon the landscape.

Unlike two other potential sites further east, near Dolwyddelan and Croesor, the Dinorwig scheme could be based upon two existing lakes so that no fine landscape would be drowned. It was the CEB's response to the environmental implications which led to the appointment of Sir Frederick Gibberd Coombes and Partners as landscape consultants for the scheme as early as 1970. It was Sir Frederick's detailed studies, presented in the parliamentary inquiry in 1973, which established the need for good design to fit into preserving the scenic views of the Llanberis Pass and the Snowdon massif, which played a key role in overcoming opposition to the scheme from a number of quarters.

At the same time, environmental pressure led to the 400 kv transformer substation required for the station and the 11 km cable linking Dinorwig with the national grid being placed underground, at considerable extra expense. Under the original proposals, it was also planned to enlarge the capacity of Llyn Peris (the lower lake) by building high embankments. But then because of the impact on the landscape, it was agreed instead to excavate the bed of the lake and widen it by removing quarry detritus to achieve the same effect.

Low-lying

The key aspect of the final design of all the works and structures around Llyn Peris is that they have been made as low lying as possible to preserve the special flat valley floor character of the landscape. Detailed studies were made to work out ways of dealing with the disposal and shaping of the large amounts of slate waste generated by the construction programme, the tailworks, and the tunnel portal forming the main entrance to the power station.

A low embankment had to be built along the northern side of the lake to carry the access road to the power station, since the final design still involved raising the top water level of Llyn Peris by 2.8 metres. But it follows the line of the old quarry road and was stockpiled during construction and then replaced on completion. Heather seed was collected from the surrounding area and

propagated at University College Bangor for planting on the dam face, along with selected grasses.

Despite the botanically inhospitable climate, Marchlyn Mawr at 636 metres above sea level is the highest reservoir in Britain suffering up to 200 frosts a year—the process of revegetation is going well.

Engineering structures were set well back into the hillside. Exposed walls have been faced with random stone masonry similar to others found in the area.

Sea trout

Building Dinorwig also posed major worries about the area's natural fauna. The river system feeding and draining Llyn Peris supports populations of salmon, sea trout, brown trout, eels, minnows, sticklebacks and lampreys. Llyn Peris and the neighbouring lake, Llyn Padarn, were home to populations of the unique Welsh Charr, a fish which prefers cold, deep water without great fluctuations in water level.

Before construction started a comprehensive long-term water quality monitoring programme was introduced to ensure that the habitat was not destroyed inadvertently by the disturbance

of known copper seams and the shifting of slate waste. At the same time some ecological change was inevitable given the need to drain Llyn Peris for three years in order to enlarge its capacity and construct the hydraulic links with the underground station.

There were also serious doubts whether the migratory fish would in practice negotiate the diversionary tunnel in order to reach their spawning grounds. In the event the fish did so, confounding a number of experts.

The modifications to Llyn Peris on the other hand, made it unsuitable as a habitat for Welsh Charr. The solution adopted therefore was to remove the adult fish from the lake during winter, when they came up to spawn, and strip them of ova and milt in order to rear large number of fry. Subsequently, both the adults and the reared fry were released in another lake, a few miles away, previously without charr.

There were also environmental gains. A number of the area's unique dry stone walls have been rebuilt and are now as good as new. Above all, Gwynedd Council has inherited £5m worth of badly needed road improvements, as well as another tourist attraction.

In its heyday Dinorwig slate quarry was the world's second largest

Chapter of industrial past closes

IT WAS IN July 1979 that a trade union delegation from north-west Wales went to the Welsh Office to plead for government aid to save Dinorwig slate quarry. Attempts to emulate the mechanisation methods being adopted at the neighbouring Penryn Quarry by its new owners, MacAlpine, and stem Dinorwig's financial losses, had led to a huge fall of rock in the upper part of the quarry. The plea was refused. The Government had already contributed £1m towards opening up a new quarry face at Marchlyn, which had not been a success, they were told. And on the return main journey, Sir Michael Duff, the quarry owner, told the delegation that, in the circumstances, the quarry would have to close in a fortnight.

Some 300 men lost their jobs as a result of the quarry closure, not many by modern standards. However, the closure opened the way for the CEB to use the quarry site for construction of the hydro-electric pump storage scheme which began five years later. But it was the end of an important chapter in the industrial history of North Wales.

Dinorwig was the world's second largest slate quarry (neighbouring Penryn, which

quarries the same Cambrian slate bands from the next valley and continues to be worked on a modest scale, is the largest). Slate's value as a roofing material was recognised from Roman times, but it was at the end of the 18th-century that it became industrialised. Expansion was rapid. Roofing slates from Dinorwig and other North Wales quarries were shipped all over Britain, and to Continental Europe and North America, to meet the rapidly-expanding housing needs which accompanied the industrial revolution.

Barracks

At its peak, Dinorwig employed 3,500 men, dominating the economic life of the surrounding communities for several generations. Before the arrival of modern transport, quarrymen would travel from as far afield as Anglesey each week, crossing the Menai Straits and walking up from Caernarfon on a Sunday evening. The men gathered in the barracks until Saturday lunch-time when they returned to their families and communities for 24 hours.

The slate was won from the mountainside by developing a

series of terraces 60 to 70 feet high, using gunpowder explosions powerful enough to dislodge the rock but not powerful enough to damage it.

The rock was then broken down into slabs capable of being transported down to the dressing mills or sheds where they were seen mechanically into pieces of slate capable of being split by hand into varying sizes of roofing slates.

It was skilled work but in many areas also dangerous and unhealthy. Rockmen had to be able to work with hammers and heavy chisels on the quarry face hanging from ropes, in all weathers. Conditions in the dressing sheds, while better from the point of protection from the elements, were hazardous because of the problem of slate dust. The industrial disease, silicosis, was a major scourge at Dinorwig because the rock has a higher than average content of silica.

The North Wales quarries were famous for their cultural life. The men gathered for their workbreaks in a canteen or messroom. They were important social and cultural institutions in which the issues of the day, be they a point of religious doctrine, political philosophy or

the merits of a new Welsh poem or novel, were debated and discussed.

Interestingly, the tradition lingered on during Dinorwig power station's construction. The outcome at Glyn Rhwyng was noted within the CEB for fierce debates and discussions on wide-ranging topics and issues never before aired on CEB's power sites.

The slate industry reached its zenith towards the end of the 19th century. In 1900 began the longest and probably most difficult dispute in Welsh industrial history—a three-year quarriesmen's strike over recognition of the North Wales Quarriesmen's Union and its right to negotiate on behalf of the men.

It ended in defeat for the quarriesmen, leaving a legacy of bitterness which still lingers to this day. The strike also marked a turning point for the slate industry, giving an impetus to the development of alternative roofing materials to which slate has been losing ground ever since.

A small market for Welsh roofing slates still exists. Indeed, last year, demand was boosted sharply by the generous improvement grants given by the Government before the general election (and since reinvested) to the point where the remaining North Wales quarries were unable to meet the demand and slate imports were attracted in from Spain.

The main market for Welsh slate these days, apart from being the basis for a flourishing handicrafts industry, is as a cladding material. As well as its unrivalled hard-wearing properties, architects are fond of using it—budget allowing—because of the look of quality and distinction which slate gives to any building.

The Dinorwig slate quarry will not be forgotten. The quarry terraces, ranged up the mountainside above Llyn Peris like a giant amphitheatre, will be there for centuries to come. Alongside the power station, the former quarry's main workshops have been turned into the North Wales Quarrying Museum to commemorate the industry's unique contribution to Wales's industrial and social history.

WE MOVED A MOUNTAIN

Large-scale projects do not come much larger than Dinorwig, the Central Electricity Board's hydro-electric pumped storage system in North Wales.

As principal civil engineering contractors, and leader of the McAlpine-Brand-Zschokke (MBZ) joint venture, we created what the CEB calls its "underground giant" — the biggest scheme of its type in Europe.

It was a major feat of civil engineering: we moved a mountain, in one of the most ambitious

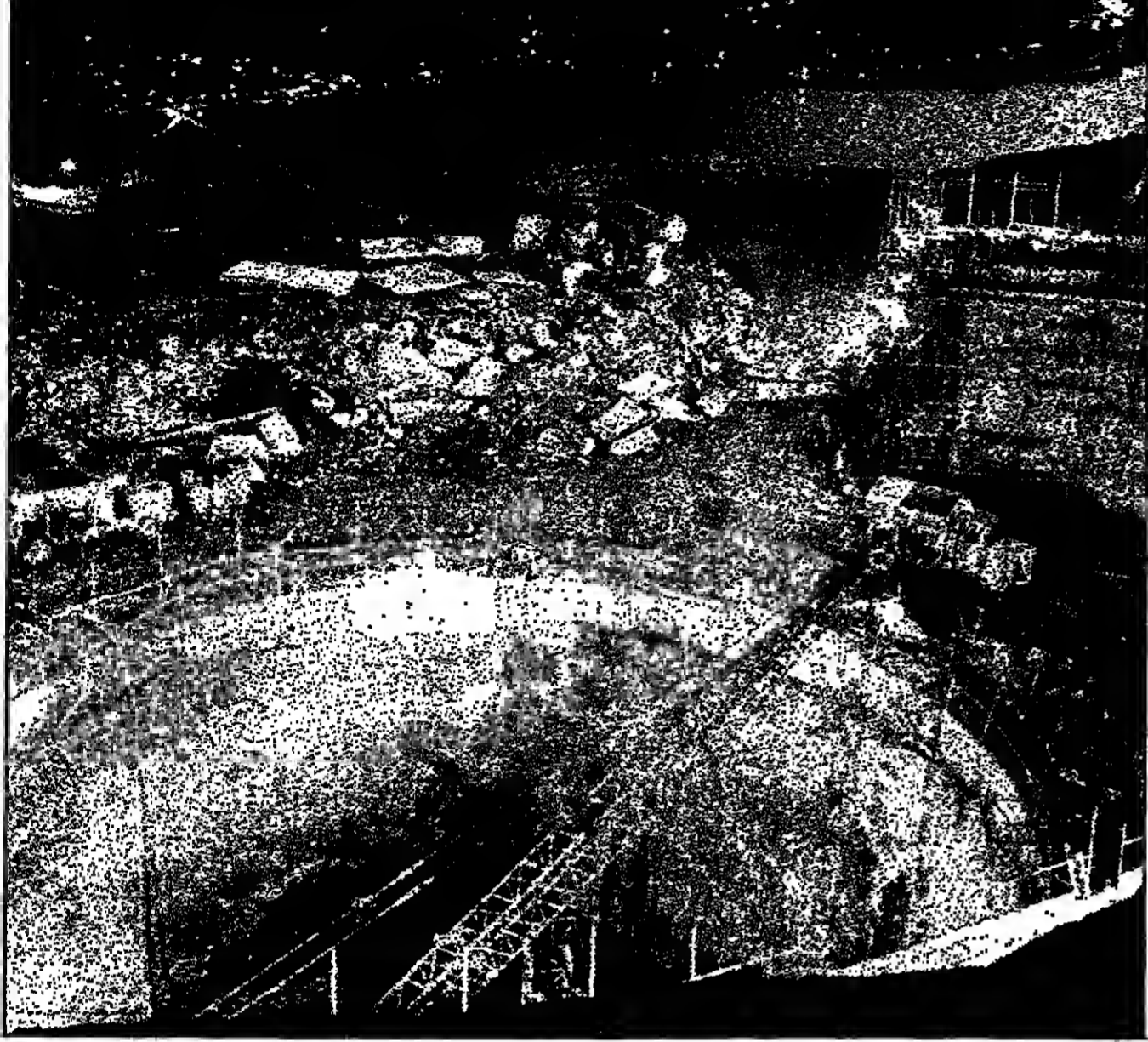
rock-moving contracts ever placed in Britain, some three million tonnes of rock were excavated to create a labyrinth of caverns, tunnels and shafts inside the mountain. In all, 16 kilometres of tunnels and shafts were driven — nine kilometres of them lined with concrete. And we carried out the mass of ancillary building and civil engineering work required, involving some 400,000 cubic metres of concrete.

It takes more than faith to move mountains.

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French Kier works deep

The pumped storage scheme at Dinorwig, North Wales, for the Central Electricity Generating Board involved the underground excavation of over 1.25 million cubic metres of rock in machine hall, tunnels and shafts.

This project is one of an exceptionally wide range of tunnelling contracts won by Charles Brand & Son Ltd, the specialist subsidiary of French Kier Construction Ltd.

Current and recent contracts by Kier International Limited include tunnels and stations in Hong Kong for the Mass Transit Railway Corporation, a 9.8m diameter road tunnel in Costa Rica, a 7km long 4.25m diameter head race tunnel in Warangal in New Guinea and a 7km horse shoe tunnel of 2.75m diameter for a hydro-electric scheme in Fiji for Fiji Electricity Authority.

The French Kier group is fully equipped to implement tunnelling and subsurface projects throughout the world.

For full details of the Group's tunnelling capability, please contact E. R. Allen, M.Sc., M.I.C.E., Managing Director, Kier International Limited, or C. A. Frettsome, B.Sc., M.I.C.E., Managing Director, French Kier Construction Limited, at Tempsford Hall, Sandy, Bedfordshire, SG19 2BD. Tel: 0787 40111.

Hydraulic tunnel at Dinorwig for Central Electricity Generating Board.

Consulting Engineer: James Williamson and Partners in association with Birnie & Partners. Joint Venture contractors: Sir Alfred McAlpine & Son Limited, Charles Brand & Son Limited, and Conrad Zschokke Limited.



Members of the French Kier Group

CONTINUED FROM PREVIOUS PAGE

The original cost of Dinorwig was put at £100m. By the time enabling act was through Parliament and more precise costings had been carried out, and the estimated final bill was about £120m. Discounting the effects of inflation over a ten-year period, the actual cost has worked out at some £170m, or about 45 per cent above estimate. The usual quoted figure of £450m, which includes changes required in the grid system much further afield in "mixed pound notes," is pounds spent at the beginning of the project were worth a lot more than those spent at the end.

The escalation in cost arose for a number of reasons. The collapse of the exploratory

tunnel led to a delay of some months and there was also a problem of one stage over the Government release of finance. More tunnelling had to be done than was originally anticipated and there were also commissioning problems with the turbine generators. In the end, commercial power generation commenced in late 1982, some three years beyond the original timetable.

But this is not regarded as a cause for criticism. Using modern estimating techniques, the projected cost would have worked out much nearer the outturn level. More allowance would also have been made not only for the special civil engineering dimensions of the scheme but also for the fact that the turbine generators were fairly unique in design and had to be tested in situ rather than in the manufac-

turer's premises. More important, Dinorwig is already proving invaluable in terms of the more efficient running of the national grid. The estimated savings it is generating in the overall cost of operating the grid of approaching £50m means that Dinorwig will have paid for itself within eight to nine years. In short, the CEB is delighted with its investment.

The main disappointment, particularly locally, is that Dinorwig's success cannot be repeated immediately at one of two other identified sites in Snowdonia. It would help to make a significant dent in Gwynedd's unemployment rate of currently nearly 18 per cent. Because of the fall in electricity demand, the CEB does not anticipate starting another hydro-electric pumped storage scheme for another eight to ten years.



# DINORWIG 3

Complex studies were undertaken to determine the design of various systems

## Exacting standards of engineering

THE SCHEME'S hydraulic and mechanical engineering systems are unique both in size and in the amount of pressure they have been built to withstand.

The two key requirements laid down in the original design brief were that the station must be capable of delivering its full output to the grid in about ten seconds, and that it must have a 40-year design life—that is, it will not have to be taken out of commission for overhaul and maintenance during that period. Pocket calculator sums, based on its likely use, quickly established it must therefore be designed to withstand some 300,000 pressure cycles.

The rapid response requirement has involved building a hydraulic system capable of delivering water to the six turbines driving the generators at rates of up to 300 cubic metres a second (85,000 gallons) and with main inlet valves capable of opening in five seconds.

Water from the upper reservoir, which has been enlarged to create a usable volume of 7m cubic metres (1,540m gallons), flows along the near-horizontal low pressure tunnel, vertically down the high-pressure shaft—443 metres deep and 3.5 metres diameter—along the 446 metres high-pressure tunnel, which has a 1 in 10 gradient, and into the high-pressure manifold system feeding six concrete-lined tunnels, of 3.5 metres diameter.

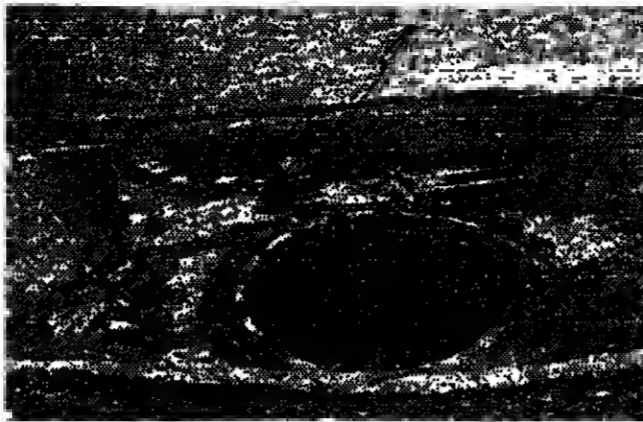
Connecting each of these tunnels with the main inlet valves are six steel-lined high pressure penstocks—170 metres long and narrowing in diameter from 3.5 metres at the main inlet valves.

Above the high-pressure shaft is a surge shaft and pond. This has two purposes. One is to act as a "pressure valve" in the system, in circumstances where generation is suddenly cut off, creating an upsurge of water up the High Pressure Shaft. It prevents the kind of juddering in the system which is sometimes experienced in the home when a tap is turned off quickly.

### Clearance

The other purpose is to ensure that the hydraulic system always retains an adequate head of water. During maximum downsurge conditions, there might otherwise be a danger of air entering the system. Overhauling the basic design of the hydraulic system, however, has been the enormous effort which has gone into ensuring its mechanical reliability—safety might be the better word. Given the nature of the station's operations, stress fatigue was clearly the main problem affecting all pressure part components. Dinorwig's particular nightmare is that the water in the hydraulic system is more than enough to fill the underground station to the rooftop several times over. In these circumstances, there must be no possibility of the pressure parts failing.

This requirement led the CEBG's design team to do extensive studies in the field of fracture mechanics. Advanced finite element mathematical techniques and photo-elastic analysis—modern methods of predicting stress levels—were used to lay down component specifications.



The surge pond under construction. Situated between the upper reservoir and the power station, the pond and high-pressure shaft act as a pressure valve and also ensure that the hydraulic system holds an adequate head of water

The outcome was contracts for some of the highest-quality castings ever ordered, particularly for the penstocks. All these components, made from top quality manganese steel rather than normal high-pressure steel, were subject to ultrasonic scanning and magnetic particle inspection to locate and size all measurable defects.

Fracture mechanics calculations were applied to establish whether the defects found would last the 40-year design life. Unacceptable imperfections had to be cut into and repaired by welding. In high-stress areas, very small defects indeed had to be treated this way.

### Cooling

Once installed, the pressure components were again subject to stress gauge analysis using automatic scanning equipment specially designed for the purpose. This equip-

ment records the results on film and tape for future comparison. In this way, crack growth can be monitored and, so far, all in-service inspections have confirmed that the pressure components are indeed meeting the design life worked out.

The six pump turbines are vertically mounted and directly coupled through intermediate shafts to six generator motors immediately above them. Each pump turbine is reversible and operates at a nominal speed of 500 revolutions per minute in either direction.

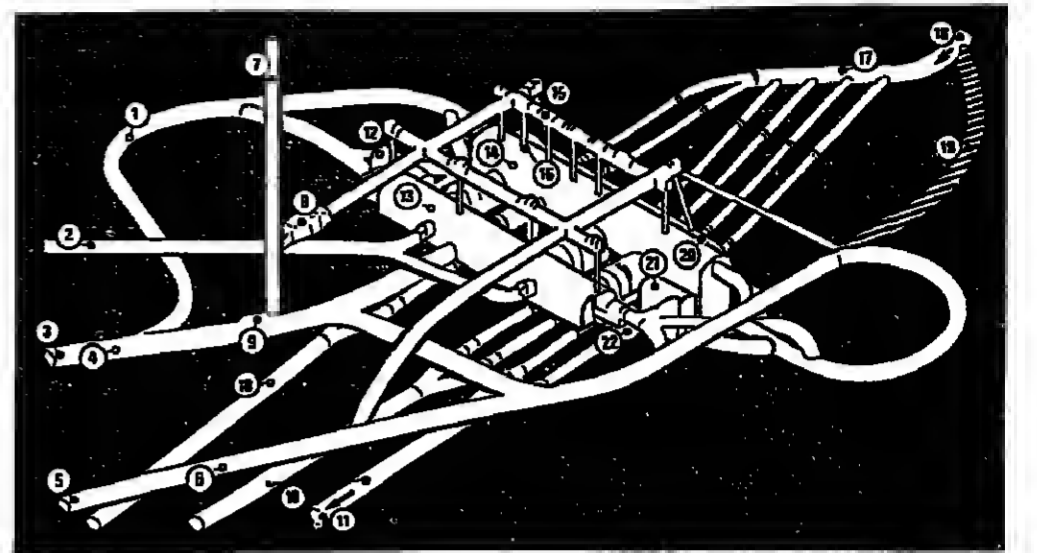
The moving element of the pump turbine is a horizontal "runner"—a form of water wheel—which rotates in a clockwise direction (viewed from above) when generating power and anti-clockwise when pumping.

The flow of water into the runner is controlled by inlet valve guide vanes under the influence of a governor system. But there is also an

event of a fault. The busbars were sent to KEMA in the Netherlands for extensive testing to ensure that they could withstand the most major electrical incident. Winding of the stators of the generator motors, built by GEC Machines of Rugby, was carried out on site rather than in the factory. This avoided the need to transport the stators in sections and weld joints in the machines which can cause overheating problems.

But this, in turn, meant that the generators could not be tested before arrival and two of the machines had to be reworked and some additional minor machining had to be done before the clearance between the running and moving parts was exactly right. It caused a significant

## MAIN CAVERNS AND TUNNELS



### KEY

- |  |  |   |
|--|--|---|
| 1 Valve galleries access tunnel                | 9 Switch house for heating and ventilating fans  | 16 Ventilation shafts                   |
| 2 To surface and Llyn Padarn                   | 10 Tailrace tunnels                              | 17 High pressure tunnel                 |
| 3 Main access portal                           | 11 To tailworks and Llyn Peris (lower reservoir) | 18 From Marchlyn Mawr (upper reservoir) |
| 4 Plant access tunnel                          | 12 Starting equipment house 1                    | 19 Construction tunnel (blocked off)    |
| 5 Access portal                                | 13 Transformer hall                              | 20 Main inlet valve gallery             |
| 6 Emergency access tunnel                      | 14 Machine hall                                  | 21 Starting equipment house 2           |
| 7 Ventilation shaft and chimney                | 15 Ventilation tunnels (high level)              | 22 Draft tube valve gallery             |
| 8 Main heating and ventilating extraction fans |  |   |

Limited space and the need for reliability posed additional problems

## Complex electrical solutions

ELECTRICALLY, Dinorwig is unusual in having the first 400 KV substation ever to be built underground. It also has an exceptionally complex system of busbars, the heavy electrical conductors which connect the substation's 23 transformers and six 300 MW generators—a consequence of both the number of machines and the station's use of variable frequency start-up equipment.

The space available for the electrical equipment underground was strictly limited and this led the CEBG to opt to equip the substation with sulphur hexafluoride (SF6) gas-filled, metal clad switchgear, in preference to traditional switchgear, because of its space-saving advantages. The aluminium busbars had to be equipped with a complex interlocking system to prevent the plant being damaged electrically in the

event of a fault. The busbars were sent to KEMA in the Netherlands for extensive testing to ensure that they could withstand the most major electrical incident. Winding of the stators of the generator motors, built by GEC Machines of Rugby, was carried out on site rather than in the factory. This avoided the need to transport the stators in sections and weld joints in the machines which can cause overheating problems.

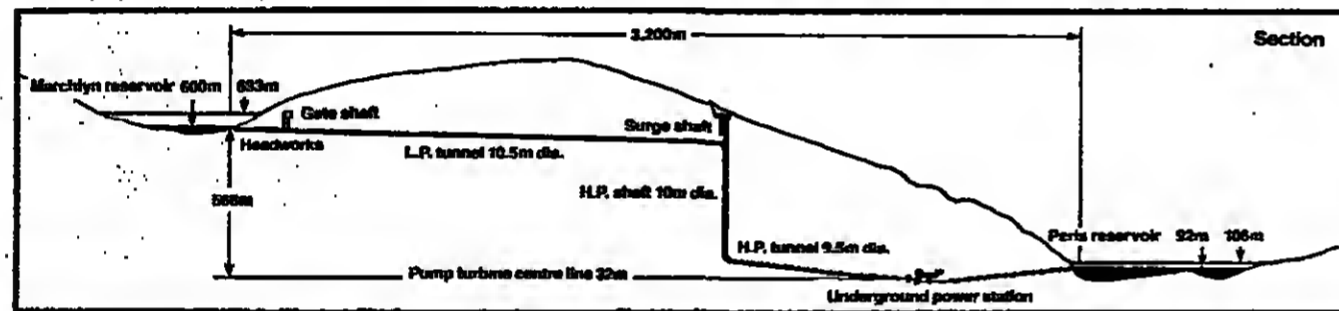
But this, in turn, meant that the generators could not be tested before arrival and two of the machines had to be reworked and some additional minor machining had to be done before the clearance between the running and moving parts was exactly right. It caused a significant

delay in the timetable for completion of the station but the modifications introduced solved both problems. The extensive underground cabling within the station's confines meant a great deal of attention had to be paid to the layout and installation to ensure that the consequences of any incident remained strictly localised. Sophisticated heat and smoke detection systems run the length of the cable systems to provide early warning.

Outside, the 400 kv cable system connecting the station with the grid is also carried underground for aesthetic reasons. In deciding the route, it was found possible to accommodate the two groups of three 400 KV cables making up the two circuits required, in a 2 metre wide trench alongside the old lake-side quarry railway, now run as a tourist railway. After 3.5 km, the two circuits diverge, one to the Pentir substation has been trekked as part of road widening scheme needed for the civil engineering traffic. It is 11 km in total length. The other circuit follows the old railway route to link with the Pentir-Trawsfynydd overhead line at Pentirswann.

### Analysis

Water cooling of the cables—needed to maintain the current rating and keep insulation down to acceptable limits—was chosen in preference to oil. Although water cooling is more expensive, there were distinct maintenance advantages. The water is cooled in three cooling stations along the route which house circulating pumps and heat exchangers and have been designed to look like cottages.



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Pirelli General plc and Pirelli Construction Company Limited, the British members of the International Pirelli Group—a world leader in cable technology and manufacture, are proud to have been involved in this unique CEBG development at Dinorwig.

In 1974 the two companies were contracted by the CEBG to supply and install the 400 KV link between the power station at Dinorwig and the National Grid, this to be installed underground so as to preserve the outstanding aesthetic qualities of the area.

The contract required 50 km of 400 KV single core 2500 mm<sup>2</sup> milliken stranded copper conductor, corrugated aluminium sheathed oil filled cable to be manufactured by the Power Cables Division of Pirelli General and installed and jointed under arduous site conditions by Pirelli Construction. In addition an optical fibre communication link was to be installed, connecting the upper reservoir to the control room. Both contracts were completed in 1980 and the environment restored to its former state.

This has been followed by other major super-tension contracts overseas, particularly in Kuwait and Singapore, and has led to both Companies winning the Queen's Award for Export Achievement.

The ability to undertake and successfully complete a project of this magnitude results from many years experience and expertise gained by Pirelli General and Pirelli Construction in the fields of cable design, manufacture and installation.

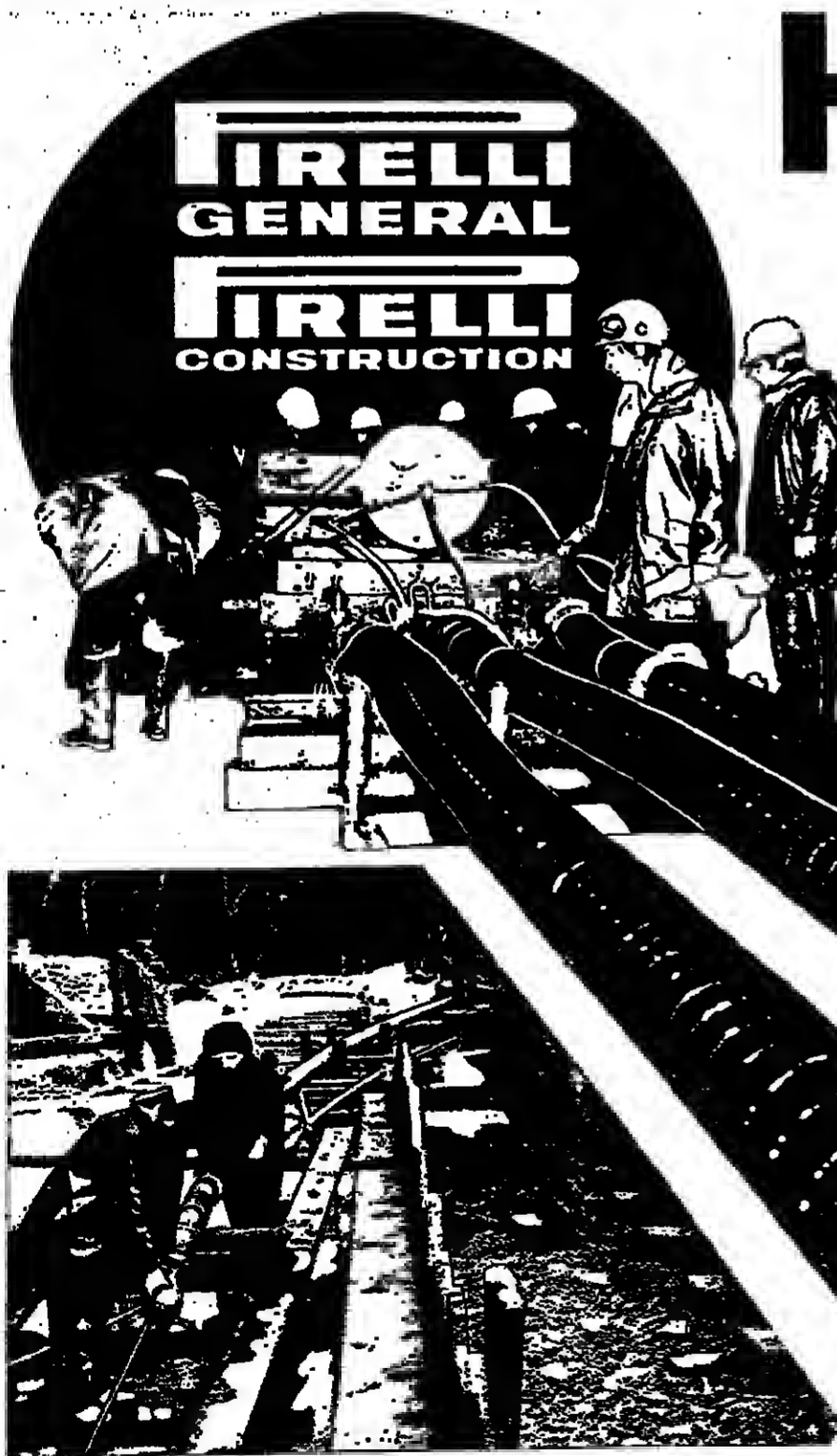
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### All the heavy current Generator Voltage Switchgear for Dinorwig was supplied by BROWN BOVERI

Brown Boveri Generator Switchgear installed at Dinorwig



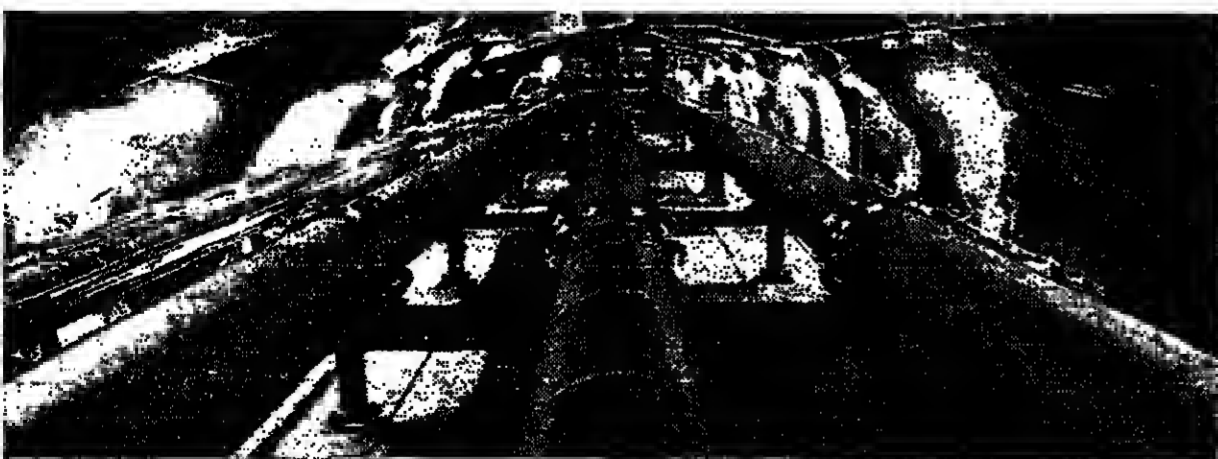
The International Brown Boveri group are proud to have supplied all the generator voltage circuit breakers, isolators, earthing switches, braking switches and starting equipment switchgear together with the associated compressed air plant and electrical and mechanical interlocking for Dinorwig.

In addition, Brown Boveri supplied pole slip protection and frequency relays. All control panels, and relay and interlocking panels were engineered and manufactured by British Brown-Boveri in Telford.

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The CEBG's stand-by plant is now completely hydro-electric

## Rapid-response power allows £50m savings

SINCE MARCH, the CEBG's "spinning reserve"—the generating plant kept on standby to meet sudden breakdowns or unexpected surges in demand—has become 100 per cent hydro-electric. It represents just one of the new dimensions which Dinorwig has added to the CEBG's day-to-day management of the national grid.

In a nutshell, Dinorwig has changed the way the grid is operated. Since coming on stream nearly 18 months ago, it has replaced the use of more expensive or partially-loaded capacity and allowed the whole CEBG system to be run more flexibly and cost-effectively. The savings accrued on the board's total generating bill are put at approaching £50m.

Dinorwig was originally conceived with three basic functions in mind. The first was simply to increase the CEBG's total generating capacity to meet what was then still being projected as a continuous rise in electricity demand. Dinorwig would add a further 1,320MW of capacity to the system.

Second was the need for a rapid-response reserve of 1,320MW in the system to provide emergency backup cover for a new breed of steam-driven generators of 1,320MW then under discussion—double the size of the present largest units. Third was the need for fine tuning of the frequency of the electricity supply system.

#### Tasks

By the time Dinorwig was ready to generate electricity, however, circumstances were somewhat different. Demand was declining, under the impact of the recession and technological change, and very little growth was projected for the next few years. The 1,320MW units had not been built. Hence there had to be a rethink.

The outcome is that Dinorwig is being used for two basic tasks. The first remains to provide an emergency reserve. However, in the absence of all 1,320 MW units, which would require four turbines on standby, this role is being limited to two of the six turbine generators. Kept spinning in air, they are the fastest means at the grid manager's disposal to respond to breakdowns in the CEBG's largest steam generators of 660 MW and to meet unexpected surges in demand (peak lopping).

Previously, the CEBG relied largely upon partially-loaded thermal plant. But apart from being inefficient in terms of fuel utilisation, the typical emergency response of a steam generator would be 15 per cent more power in 15 seconds and a further 15 per cent after three to five minutes. In contrast, Dinorwig achieves 80 per cent in ten to 11 seconds. In short, it has displaced standby capacity which is more expensive to run and less flexible.

Dinorwig's second role is economic generation. The cost of electricity generation within the CEBG system varies according to the type of individual plant being loaded, its age and size. From 25 megawatt-hour (incinerator) to 870 MW-hour (gas turbines), the grid manager's task is to meet the varying demands on the grid by loading the most economic plants while at the same time fulfilling the CEBG's statutory obligation to provide a reliable supply of electricity.

Each day he has to assess the likely requirement in the light of weather conditions, industrial demands, and a range of other variables, including the millions of electric kettles which can be switched on during a TV commercial break, and then match this to the generating capacity available. Dinorwig gives him a new flexibility.

Typically, the new station buys in the power for pumping at night at 115 MW-hour from 1-5 MW stations which would otherwise be operating only partially loaded. That power is thus available to sell back into the grid at 223 MW-hour. The turn-round efficiency is 78 per cent.

On the face of it, this is not a particularly cheap source of power but, crucially, the cost of generating from thermal plants now takes into account the energy required both to heat up the plant on start-up and the energy lost as it cools after shutdown. This essentially makes thermal plant electricity more expensive than Dinorwig's if it is generating for just a short period.

Dinorwig's flexibility of operation extends to five basic operating modes and two special ones. These are:

- 1—Generating at up to eight different load settings: zero and full power, full power being achieved in 1 min 40 seconds from standstill.
- 2—Spinning in air, ready for emergency generation in 10-11 seconds.
- 3—The stationary mode.
- 4—Spinning in air in a pumping direction.
- 5—Pumping—always carried out at full load.
- 6—Black station start—in the event of the collapse of the grid,



Above: one of the six generator/motors being constructed on site and (left) three of the rotors in the machine hall, which is 180 metres long and 60 metres high. The electrical annex and control room occupies one side of the main cavern and constitutes one of the largest steel-frame buildings in Wales. The Dinorwig plant is highly automated and has a very much faster emergency response to surges in demand than steam generator equipment. Though the plant could be operated by remote control, a small round-the-clock staff ensures that it always comes in on cue.

Dinorwig can start generating autonomously using its own emergency diesel generators and batteries.

7—Back to back pump start—the use of one generator to start another in the event of the variable frequency starting equipment not being available for any reason.

A complete pumping cycle to reduce the lower lake from maximum to minimum takes 6 1/2 hours. To turn round the function of the station completely from full pumping to full load generating takes eight minutes.

The station is highly automated. Providing its vast array of auxiliary equipment is functioning correctly, it can be operated by one person. At the centre of the control system is a microprocessor which monitors a series of 300 steps required to start up individual units. And to avoid malfunctioning signals halting the start-up, redundancy techniques have been incorporated in the command system. Thus, for example, there are three measures of oil pressure and the microprocessor takes its cue

from a two out of three voting arrangement.

The net result is that the number of permanent jobs created at Dinorwig is just 78. To service three shifts round the clock seven days a week there are six teams of six, consisting of a senior engineer, a first assistant engineer, a mechanical fitter, an electrical fitter, an instrument craftsman and a general duties assistant.

#### Monitoring

The remaining staff consist of 10 engineers on daytime duty, nine administrative staff, craftmen and general duty assistants.

Sitting at the main desk in the underground control room, the engineer has ranged around him a series of display panels monitoring everything within the station. These include a hydraulic control or water management panel which displays visually the water levels in the hydraulic system and, in digital form, the amount of generating capacity available and the amount of energy required to pump; a fire protection monitoring panel; an elec-

trical transmission panel showing the 18KV (the voltage at which power is generated) and 400KV (at which it is transmitted) systems; a works electrical panel; and, behind this, a unit control desk with which he can control individual units in abnormal situations.

This desk has to be used for back-to-back start up, the only mode of operation requiring two men to operate it rather than one.

Data logging—reports on the condition of the station's units produced on an hourly, daily and weekly basis—are also carried out automatically.

Indeed, modern communications technology is such that Dinorwig could be operated remotely from grid control headquarters. Remote control is the norm for a number of French hydro-electric stations. But the structure of the French grid is such that if a particular hydro station fails to come in on cue, it can be easily covered from elsewhere. Dinorwig, on the other hand, is too valuable to the efficient operation of the CEBG system to be left entirely in the hands of computers.

## WHESOE & WATER POWER

The Dinorwig Pumped Storage Power Station provides an excellent example of the specialized Whessoe capability for the manufacture and installation of heavy fabrications. High pressure penstocks 2.3 to 3.8 metres in diameter, and 40/60mm thick embedded in the tunnels, delivers the water to each of the six turbines. In all 2460 tonnes of fabricated steel, for the six lines, were produced at the Darlington and Middlesbrough facilities in transportable sections, and installed within the tunnels by Whessoe's Construction Division.

Low pressure linings 3.75 metres to 4 metres diameter and 22mm/38mm thick were similarly supplied and installed downstream of each of the six turbines; a total of 1400 tonnes of fabricated steel. The Victoria Dam and Power Station in Sri Lanka is now being brought to completion. Whessoe have supplied and installed the 5.15 metre diameter power

tunnel steel lining and the 3 metre diameter penstocks with a connecting trifurcation; some 4000 tonnes of steel in all.

Earlier contracts have involved the supply of penstocks, bifurcations and turbine components for Africa, India and Pakistan, and we are currently involved in similar projects in South East Asia. The Whessoe capability to provide and install these specialized water systems is based on comprehensive technical, production and construction facilities. These include extensive manpower resources, project co-ordination and control by progressive management, and the utilisation and continuous development of advanced fabrication, construction and welding methods in both shop and site environments. Whenever there's a need for high integrity steel plate structures Whessoe can meet it—anywhere in the world.

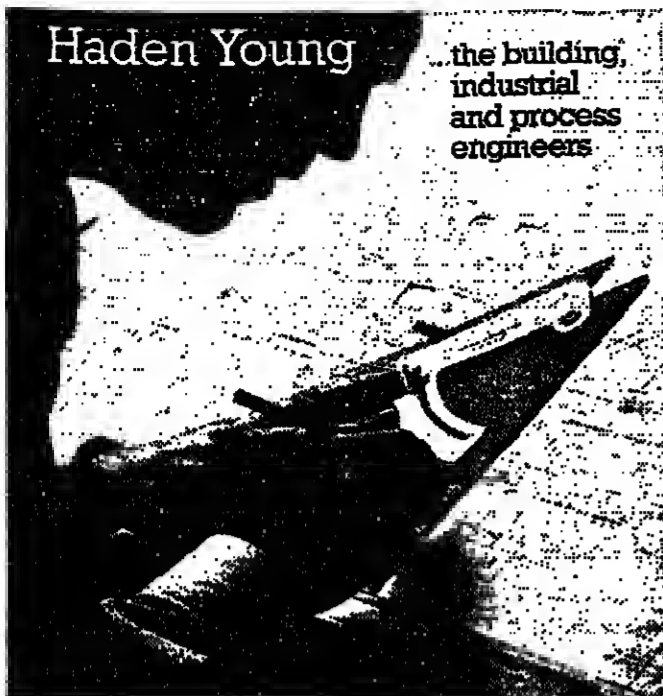
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## Flexible approach to contracts

AMONG THE usual features of the Dinorwig scheme has been the way in which it was contracted and managed. The demands of the scheme created a need for changing solutions.

Three major problems confronted the CEBG at the outset: the project's scale and complexity, even by CEBG standards; the civil engineering industry's lack of experience of tunnelling in slate; and, third, the social and environmental implications.

The board, then led by Sir Arthur Hawkins, decided to break with precedent and appoint Mr Iorwerth Ellis, a Welsh-speaking Welshman, to oversee execution of the whole project on site, rather than follow the usual practice of locating the project manager at the general development and construction division's headquarters at Gloucester.

Mr Ellis's permanent presence on site not only gave the project a drive and momentum which might otherwise have been dissipated in a wester of communications between Llanberis and Gloucester, but it also contributed to better industrial and public relations in an area where the first language for most of the population is Welsh.

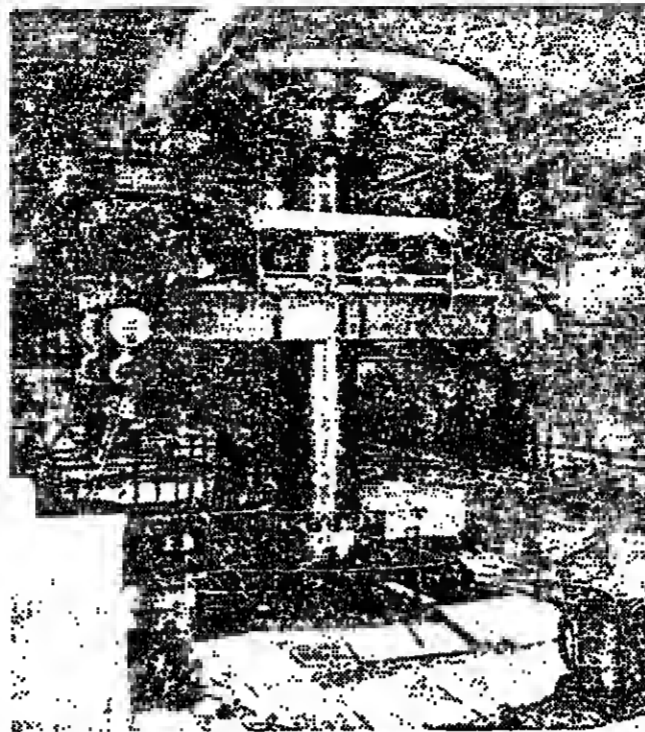
The workforce and the local authorities felt that this move saved them someone at the top with a sympathetic ear who understood their particular concerns and preoccupations and would do his best to meet them.

The initial idea of the CEBG and consultant engineers, James Williamson and Partners (Glasgow), was to divide the project into seven separate major contracts and invite competitive tenders in the normal way. However, when it came to the crunch, the whole approach had to be radically changed.

Potential contractors, already worried about the normal problems of tunnelling in slate had their fears heightened by the collapse of the first exploratory tunnel after it had been driven just eight feet into the quarry face. On top of this, they were being invited to tender competitively during the period of hyper-inflation which followed the 1973 world oil crisis. The result was that the civil engineering work was packaged into two major contracts — one for Marchlyn Mawr (upper) reservoir. The other, far larger, for the underground and Llyn Peris (lower) reservoir works.

Potential contractors were then invited on site to be given a detailed explanation of the scheme by the board's project team and the consultant engineers, and encouraged to work consortia to bid for the work on the basis of a target price/cost-reimbursable contract. The tendered profit percentage depended upon the ratio of actual cost to the target price.

Three consortia put in for the main contract on this basis. And after a complex assessment, it was awarded to a consortium led by Sir Robert



One of the pump-turbines being installed. Incentives to keep costs down were maintained despite considerable changes in the management and contract structure.

MacAlpine and Son in partnership with Charles Brand and Son, the tunnelling subsidiary of the French Kier group, and Conrad Zschokke of Switzerland, a company with long experience of drill and blast tunnelling in the Alps.

Within MBZ, as it was named, thereafter, MacAlpine was in overall charge. Brand led the underground drilling and blasting work, backed up by MacAlpine, while Zschokke worked out the tunnelling strategy and complex logistics of excavating more than 3m tonnes of rock from deep inside the mountain. (Interestingly, it was not Zschokke's first association with North Wales. The man who built the Swiss-style rack and pinion railway to the top of Snowdon went on to become Zschokke's chief engineer.)

### Remote

The upper reservoir contract was awarded to Gleeson Civil Engineering on a normal competitive basis. Due to its remoteness, separate site offices were established near the site to house the majority of Gleeson's staff and their consultant engineers, Binnie and Partners. The main headquarters of the project were located in a purpose-built office complex on the site of a disused RAF camp at Clyn Rhonwy, about a mile from Dinorwig itself.

In theory, the main contractor's profit level depended upon minimising the actual cost. But it also required the CEBG to adjust the target price in the light of unforeseen difficulties, changed working methods and modifications to the scheme as it progressed. Hence there was room for haggling over the merits or otherwise of particular targets with claims being investigated at the CEBG's expense.

Three years into the scheme, a good deal of paper was beginning to fly between MBZ and the CEBG.

In September 1979, therefore, the form of the contract was changed to a "cost plus fixed management fee," with financial incentives for the completion of two key objectives within a set time limit. These were completion of the civil engineering works required in the machine hall before installation of the turbines could begin; and the second was completion of the hydraulic system in a state of readiness for flooding.

The contract alteration was also accompanied by an official change in the structure of the scheme's management.

Whereas week-by-week control was exercised originally by an executive control team consisting of representatives of the CEBG, the consultants and the contractors, in time it came to be run by a management trioka, consisting of Mr Ellis as chairman, Mr David Eaton project manager of MBZ, and Mr Iddon Jones, James Williamson's resident partner. The new contract reflected this reality.

There were suggestions at the time that this revision would remove the contractor's incentive to keep down costs. Mr Eaton rejected this, arguing that it was in the interests of the MBZ members consortium to satisfy the CEBG if they wanted further contracts in the future.

In the event, MBZ not only met both main target dates, but did so at substantially lower cost than it forecast at the time of the contract change. In the circumstances, there have been suggestions that Dinorwig's latter contract provides a precedent for other major civil engineering projects. Mr Ellis's view is that it would not have been possible without the trust which had grown up between the parties involved after they had been working on the project for three years.

"It created a great deal more common ground and enabled us to concentrate our energies on the main quarry — the overall cost of the project."

## Emphasis on training

THE TUNNELLING equipment and some of the techniques used at Dinorwig had only been used previously in Britain on a very small scale if at all. Therefore, it was considered necessary by Mr Iorwerth Ellis, project manager, to train the required labour force off the production faces and to establish a special training scheme. He also insisted that:

(a) All labour recruited specifically for the project should be recruited through a Department of Employment Job Centre established on site.

(b) Priority would be given to local people living within the travel to work area. Local was defined as someone who had been working in the area for five years previously.

A committee was established to formulate the training policy. All interested parties were represented—the trade unions, the contractors, the various industry training boards, the Department of Employment, the civil consultants and the board.

The cost of training—about £4m—was paid for by the CEBG and a grant was obtained from the EEC.

### High standards

The tangible benefits were significant. Standards of safety and productivity were high and the quality of the workmanship excellent. Once established, the training programme was extended to cover many tasks and skills including assembly of the generator/motors which were too large to be transported to site. This work is normally carried out in a factory.

There were also intangible benefits which helped to establish good industrial relations.

Another innovation was to set up regular meetings with the Health and Safety Executive, the civil consultants, and the board staff including the regional training officer. The Health and Safety Executive were represented by members of the Employment Medical Advisory Service, the Factory Inspectorate and the Mines and Quarry Inspectorate.

Discussions were held early enough so that any changes in the proposed design or method of construction found essential could be carried out without affecting the programme. Mr Ellis says: "The help and advice we received from those outside the team made a significant contribution to Dinorwig's excellent safety record."

### Conflict

There were many conflicts of interest in this multi-disciplined multi-contractor/organisation project. "It was my task to minimise areas of conflict as far as possible and when a conflict of interest did arise to deal with it firmly and quickly."

One way of minimising conflict was by changing the terms of the contract between the Board and the contractor, in order to ensure that their interests were as allied as possible. An element of risk was involved in such an exercise and such decisions were based on proven mutual trust.

Another way was by establishing the site payment policy, (before the National Large Site Agreement) that ensured within the limits of rough justice that the employees of different contractors at Dinorwig had an opportunity to receive similar earnings for similar efforts, under similar conditions. This avoided the leapfrogging that was occurring on other large sites.

Mr Ellis praises the constructive approach that was adopted by trade union officers, shop stewards and the contractors' managements and he comments: "Dinorwig attracted all kinds of visitors from all over the world and I profited from meeting many of them."



Iorwerth Ellis: priority for local workers.

## THE ASSOCIATION OF CONSULTING ENGINEERS



Members of this Association are independent consulting engineers who are currently devising, designing, supervising and inspecting engineering projects of all kinds in more than 340 countries. Members concerned with hydro-electric and pumped storage planning and design undertake all aspects of consultancy in this field from initial feasibility studies to site selection and investigation, preparation of estimates, specifications and drawings to the supervision of construction and the ultimate commissioning and in-service monitoring of the power station.

The highly professional services offered are based not only on experience and technical competence but also on integrity and independence.

The construction of Dinorwig was preceded by studies of three sites in North Wales. These studies were undertaken by the Consulting Engineers, James Williamson and Partners, with the assistance of Binnie and Partners and Merz and McLellan, under the direction of the Central Electricity Generating Board.

The design and supervision of civil engineering works at Dinorwig Power Station were carried out by:

James Williamson and Partners

In association with:

Binnie & Partners

in respect of dams and reservoir works. Advice on pump turbines was given to the Central Electricity Generating Board by:

Merz and McLellan

who were also responsible for hydraulic transient studies. Enquiries about the Association or services available through its Members may be made to:

The Secretary

The Association of Consulting Engineers  
Alliance House, 12 Caxton Street,  
London SW1H 0QL

Tel: 01-222 6557 Telex: 268312 CONSENG

## CEGB considers the future

NERVE CENTRE of the Central Electricity Generating Board's power station construction is the generation construction and development division at Barnwood near Gloucester. Established in 1971, it has been geared to handling as many as 12 major projects or more at a time.

Dinorwig has been the prime concern of 47 CEBG engineers and dozens of contracts, financial and clerical staff, divided between Barnwood and Llanberis, for a quarter of their working lives.

But the division is now faced with a difficult few years as the large workload of the 1970s and early 1980s nears completion and demands upon its expertise in the organisation of new station construction dwindle.

Dinorwig is just one among a number of major projects which have been completed recently or are at the commissioning stage. Of 10 projects currently still in the pipeline, three or four will be finished this year. In two years' time, the division could be down to just two major domestic projects — the final phase of Drax, in Yorkshire, due to be completed in mid-1986, and Heysham Two due to be finished the following year.

That will be the situation unless there is an early decision to press ahead with construction of a pressurised water nuclear reactor (PWR) after the Sizewell B inquiry — an alternative form of power station.

The division's basic problem is one of keeping the organisation and expertise together to be ready to tackle the electrical energy generation requirements of the 1990s when leaving aside the question of the trend of demand, a number of existing stations will reach the end of their operational life and require replacement.

It is a problem facing not just the division itself, but also the construction industry and the manufacturers of power station equipment. The number

of staff at Barnwood has been reduced already from a peak of some 2,100 four years ago to about 1,700. The retirement of a bulk of personnel who joined the CEBG just after the war, as the industry was beginning its expansion, will provide an opportunity to trim numbers still further.

Thereafter, says Mr Ron Burbridge, director of project management, there should be enough work to keep a more tightly-staffed division fully occupied and maintain its role as a centre of excellence.

### Conversion

Notwithstanding the miners' strike, the division expects to be called on to supervise another oil-to-coal conversion of an existing power station. It also sees room for some more small hydro-electric stations akin to the one now being built at Keilder in Northumberland.

It has also been doing a certain amount of consultancy work abroad, notably on the Rihard coal-fired station in India, the Castlepeak B station in Hong Kong, being built by the China Light and Power Company, and a number of projects in Australia.

But Mr Burbridge stresses that the division is anxious not to upset the British consultant engineering industry by muscling in on its traditional overseas markets in a big way.

The division's expertise extends to the mechanical and electrical aspects of station design, turbines, nuclear installation, materials and pressure plant engineering, and piping, heating and ventilation systems.

While there is regret that construction of another Dinorwig is unlikely to be justified for at least another eight to ten years, the division will have work to do, carrying out analyses and providing technical advice and back-up on the maintenance of the CEBG's existing power station capacity.

It's no surprise that Gwynedd is home to one of the most advanced hydro-electric power stations in Europe. Or secret that more and more companies of the stature of G.E.C. (Hopton), Anglesey Aluminium, and Robertson Research International are realising the enormous advantages of harnessing the other powerful resources found in this high energy county.

**Special Development Area Status**  
An impressive package of Government grants, low interest loans and generous tax concessions, offering a powerful incentive to firms considering relocation or expansion, in a major part of Gwynedd.

**Low Operating Costs**  
Gwynedd's rental values and general rates for industrial and commercial properties are amongst the lowest in the U.K. This is another welcome boost for expanding firms, which is particularly useful when some of the more short term benefits come to an end.

**Energetic Workforce**  
Gwynedd is fortunate in having a most enthusiastic and loyal workforce, with a pool of skilled and semi-skilled labour that are, rightly, proud of their exemplary industrial relations record.

**Gwynedd's formula works**  
By harnessing these powerful natural resources, many local companies are not only successfully expanding themselves, but are catalysing the expansion of many component and service industries. More and more of the hi-tech input of Bangor University and the technical facilities offered by the Colleges of Further Education in Gwynedd.

**An irresistible pull**  
The same beautiful, unspoiled countryside that brings thousands of holidaymakers to Gwynedd each year, makes it an attractive place to live. Housing is as central or rural as you care to make it and schools are of a universally high standard. This superb environment is very conducive to the development of the growth industry of the future.

**A move for the better**  
Moving to Gwynedd couldn't be easier. A whole range of multi-purpose sites and premises are ready for occupation now. Gwynedd's Economic Development Office know how to make your move as

easy as possible, and even the smallest companies will be given equal encouragement.

Find out about the high energy county today — and you could soon be using our resources to help you make the most of yours.



## The high energy county

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